



29261 US Highway 95
Lewiston, ID 83501
208-746-8243

April 19, 2017

Scott Wilder
Office of Compliance and Enforcement
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 900, MS OCE 101
Seattle, WA 98101

Dear Scott,

As you know, Valley Waste Disposal, LLC would like to be the designated landfill for the Orofino EPA asbestos disposal project and to do this we understand that our facility will need to be CERCLA approved. You have requested that we send the documentation that controls our operation and the organizations involved.

We are governed by Idaho Public Health and Idaho Department of Environmental Quality. We are not issued permits but instead we are controlled by an Operation Plan. I have submitted the basic operation plan and a recently approved addendum.

Our local contacts are as follows:

Public Health, Idaho North Central District
Nez Perce County
215 10th Street
Lewiston, Id 83501
Sherise Jurries, R.E.H.S.
Environmental Health Specialist Sr.
sjurries@phd2.idaho.gov
208-799-0355

Department of Environmental Quality
Lewiston Regional Office
1118 "F" St.
Lewiston, ID 83501
Nicolas Hiebert, P.E.
nicolas.hiebert@deq.idaho.gov
(208) 799-4370

Please contact me for further questions or concerns. We wish to do everything possible to meet the needs of this asbestos project.

A handwritten signature in black ink that reads "Brian Benedict".

Brian Benedict,
Owner, Staff Engineer
Valley Waste Disposal, LLC

(b) (6) (

(b) (6)

NON-MUNICIPAL SOLID WASTE MANAGEMENT FACILITY

OPERATING PLAN APPROVAL APPLICATION

(revised 01/04/2016)

REQUIREMENTS

Pursuant to IDAPA 58.01.06, approval of the Operating Plan is required for all new and lateral expansions of non-municipal solid waste management facilities. Existing facilities are required to comply with the operating requirements within two years from April 26, 2002. Existing facilities may submit existing approvals that demonstrate compliance with applicable operating requirements. Operating Plan approval process may occur after or concurrently with the Siting Application approval. The Operating Plan approval is required prior to operation of the facility. Approval from local authorities may be required. It is recommended that the applicant contact the county and/or city in which the facility will be located.

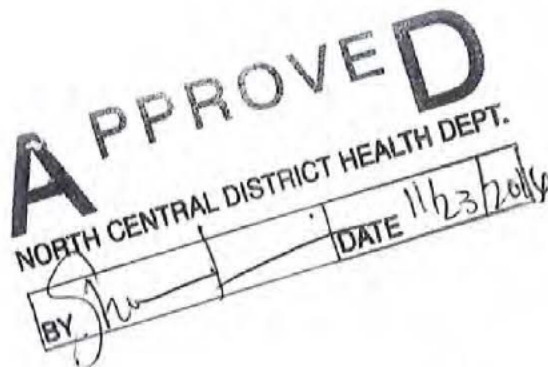
PRE-APPLICATION MEETING

It is very important that the applicant meet with the appropriate DEQ regional office staff before the site approval application is submitted. A tour of the site is very helpful in identifying any possible concerns that may need to be addressed in the application. A pre-application meeting with DEQ and the local Health District is recommended. This will help ensure that there is compliance with location restrictions and operational requirements and that sufficient information is submitted to allow for a timely review. It is advantageous to DEQ, the local health district and the applicant to move this process forward as quickly as possible.

REQUIRED SUBMITTALS

Please fill out the attached form, complete the questionnaire, and attach at a minimum, the indicated documentation to support the location restriction determinations. Original and 2 copies of the application and supporting documents should be sent to the appropriate District Health Department listed on the following page.

INCOMPLETE INFORMATION MAY CAUSE DELAY IN THE APPROVAL PROCESS



DISTRICT HEALTH DEPARTMENT CONTACTS

Please send the original and 2 copies of the completed application and supporting documents to the appropriate health district office below:

Panhandle Health District
8500 N. Atlas Road
Coeur d'Alene, ID 83835
Contact: Erik Ketner @ 415-5224

North Central Health District
215 10th Street
Lewiston, ID 83501
Contact: Sherise Jurries @ 799-0355

Southwest District Health
13307 Miami Lane
Caldwell, ID 83607
Contact: Brian Crawford @ 465-5401

Central District Health Department
707 N. Armstrong Place
Boise, ID 83704
Contact: Mike Reno @ 327-8522

South Central Public Health
1020 Washington St. North
Twin Falls, ID 83301
Contact: Scott Arnel @ 678-8221

Southeastern Idaho Public Health
1901 Alvin Ricken Drive
Pocatello, ID 83201
Contact: Steve Pew @ 785-2160

Eastern Idaho Public Health District
1250 Hollipark Drive
Idaho Falls, ID 83401
Contact: Nathan Taylor @ 533-3128

NON-MUNICIPAL SOLID WASTE OPERATING PLAN APPROVAL APPLICATION

I. GENERAL INFORMATION - Please complete (type or print) the General Information section or attach Reapplication Meeting Information if completed.

Applicant's Name Diane Stephens

Applicant's Signature *Diane Stephens*

Application Date 10/25/2016

Name of Site Valley Waste Disposal, LLC, 29261 Highway 95, Lewiston ID 83501

Location of Site NE 1/4 of section 29, township 36 north of range 5 west of the Boise Meridian
East of Highway 95.

Total Acreage of Site 11.2 acres including expansion

Legal Description Parcel RP36N05W290001

Parcel RP36N05W209050

Property Owner of Record Benedict Enterprises, Inc.

Address: (b) (6)

Vancouver, WA 98683

Telephone: (b) (6)

(attach written approval from owner to use site for stated purpose, if owner is different from applicant)

Operator of Proposed Facility Valley Waste Disposal, LLC

Address: 29261 US Highway 95

Lewiston, ID 83501

Telephone: 208-746-8243 (Gloria Hammack)

Contact Person Regarding This Application

Name: Diane Stephens

Address: (b) (6)

Vancouver, WA 98683

Telephone: (b) (6)

This application is for a;

☐ NEW FACILITY

☒ LATERAL EXPANSION of existing facility

Proposed Tier Classification;

☒ Tier II

☐ Tier III

This application is for what type of facility?

☒ Construction & Demolition Waste Landfill

☐ Transfer Station

☐ Industrial Landfill

☐ Compost Facility

☐ Septage Disposal Site

☐ Waste Tire Collection Site

☐ Petroleum Contaminated Soils Processing Site

☐ Other (please specify) _____

What is the composition of the waste material to be managed, processed or disposed?

Material	%
<u>Agricultural Wastes</u>	<u>1 %</u>
<u>Construction/Demolition Waste</u>	<u>84 %</u>
<u>Inert Wastes</u>	<u>10 %</u>
<u>Wood Wastes</u>	<u>2 %</u>
<u>Yard Wastes</u>	<u>1 %</u>
<u>Special Wastes & Other</u>	<u>2 %</u>

What is the volume/mass of material received per day?

Volume/Mass

Unit

32

Tons

II. OPERATING REQUIREMENTS - OPERATING PLAN APPROVAL

Instructions: These questions relate directly to the operating requirements for non-municipal solid waste management facilities. Answer the questions below and, in an attached report, include all supporting documents and describe how they were used to make the determinations.

01. GENERAL OPERATING REQUIREMENTS - All Tier II and Tier III solid waste management facilities regulated under the Solid Waste Management Rules, IDAPA 58.01.06 shall comply with items a through l.

a. Prohibited Activities

- i. Disposing in a landfill of regulated waste from any business that provides health care, support to health care businesses, or medical diagnostic services that has not been decontaminated.
 - ii. Speculatively accumulating materials.
 - iii. Radioactive Waste. No facility regulated under IDAPA 58.01.06 may accept radioactive waste except in accordance with Section 39-4405(9) and IDAPA 58.01.10 or a facility regulated under the authority of The Atomic Energy Act of 1954, as amended. Indicate what steps will be taken to prohibit the acceptance of radioactive materials. Indicate how radioactive waste will be excluded from the facility.
- b. Signs. Facilities open to the public shall clearly post visible signs at each entrance to the facility. Signs shall specify at a minimum the name of the facility, hours of operation, waste accepted at the facility and an emergency phone number.

Is the facility open to the public?

 X YES

 NO

If yes, indicate information to be displayed on sign.

Facility Name: Valley Waste Disposal, LLC

Hours of Operation: 8:00 A.M. - 4:30 P.M. Monday - Saturday

Waste Accepted: Construction, Demolition, Inert, Yard Wastes

Emergency Phone Number: 208-791-5767

- c. Waste Types. Only the waste types listed in the approved operating plan may be accepted for disposal or processing. Provide a list of the wastes to be accepted.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 2 & 3

- d. Waste Monitoring and Measurement. Provisions shall be made for monitoring or measuring all solid waste delivered to a facility. The waste monitoring program shall include:

- i. A daily written log listing the types and quantities of wastes received.
- ii. A plan for monitoring and handling receipt of unauthorized wastes.
- iii. Routine characterization of the wastes received.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, pages 3

- e. Communication. Communication devices shall be available or reasonably accessible at the site. Indicate what communication devices will be used and where the devices are located.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 4

- f. Fire Prevention And Control. Adequate provisions shall be made for controlling or managing fires at the site. Indicate personnel, equipment and location of equipment used for controlling or managing fires at the sites.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 4

- g. Facility Access. Unauthorized vehicles and persons shall be prohibited access to the facility. A facility open to the public shall accept waste only when an attendant is on duty. The facility shall be fenced or otherwise blocked to access when an attendant is not on duty. Indicate how access to the facility is controlled.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 1

- h. Scavenging And Salvaging. Scavenging by the public at a facility is prohibited; however, salvaging may be conducted in accordance with a written operations plan and only by the owner, operator or an authorized agent.

Will salvaging be conducted?

 X YES NO

If yes, indicate person (company) conducting salvaging. (By Employees only)

Operating Agreement, page 4

- i. Nuisance Control. The owner and operator shall control nuisances, including but not limited to
- i. Disease or Discomfort. Operations at any facility shall not provide sustenance to rodents or insects that cause human disease or discomfort. Describe how the facility will be operated to prevent sustenance to rodents or insects that cause human disease or discomfort.
 - ii. Vector. Vector control procedures shall prevent or control vectors that may cause health hazards or nuisances. Describe vector control procedures to prevent or control vectors that may cause health hazards or nuisances.
 - iii. Odor. The facility shall be operated to control malodorous gases. Describe how the facility is operated to control malodorous gases.
 - iv. Litter. Effective measures shall be taken to minimize the loss of debris from the facility. Debris blown from or within the facility shall be collected and properly disposed to prevent objectionable accumulations. Describe measures taken to minimize the loss of debris from the facility and measure taken to collect and properly dispose of accumulation.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 4

- j. Bird Hazards To Aircraft. No facility may handle putrescible waste in such a manner that may attract birds and increase the likelihood of bird/aircraft collisions. Facilities that are located within ten thousand feet of any airport runway used by turbojet aircraft, or within five thousand feet of any airport used by only piston-type aircraft shall operate the facility in such a manner that birds are not a hazard to aircraft.

Is the facility within ten thousand feet of any airport runway used by turbojet aircraft or five thousand feet of any airport used by only piston-type aircraft?

 YES X NO

If yes, indicate whether putrescible waste will be managed at the site and how waste will be managed to prevent bird/aircraft collisions.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 5

- k. Open Burning and Fires. Open burning is prohibited at facilities except as authorized by IDAPA 58.01.06 and IDAPA 58.01.01.

- i. No open burning shall be conducted during an air pollution episode, declared in accordance with IDAPA 58.01.01.
- ii. Open burning is authorized only if it is infrequent and the materials are agricultural wastes, silviculture wastes, land clearing debris, diseased trees, or debris from emergency cleanup operations. Materials burned shall not include garbage, dead animals, asphalt, petroleum products, paints, tires or other rubber products, plastics, paper (other than that necessary to start the fire), cardboard, treated wood, construction debris, metal, pathogenic wastes,

hazardous wastes, or any other substance (other than natural vegetation) that when burned releases toxic emissions, dense smoke or strong odors.

- iii. Open burning shall be conducted pursuant to conditions set forth by the Department or local fire authority. The owner and operator of the facility shall contact the Department and the local fire authority prior to conducting open burning to report its nature and location.

Will open burning as describe above be conducted at the site?

_____ YES X NO

If yes, describe how open burning operations will comply with the above-stated requirements.

1. Storm Water Run-On/Run-Off Controls. The operating plan shall include sufficient storm water management provisions, which may incorporate a NPDES storm water pollution prevention plan, to prevent contamination of surface and ground water and prevent the spread and impact of contamination beyond the boundary of the facility. Describe storm water run-on/run-off controls that will prevent contamination of surface and ground water and prevent the spread and impact of contamination beyond the boundary of the facility. Include a NPDES storm water pollution prevention plan if applicable.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 5 & Attachment C

Also TD&H Engineering Report (Attached).

02. **PROCESSING FACILITY OPERATING REQUIREMENTS.** In addition to the requirements specified in section II.01, processing facilities shall also comply with the following operating requirements.

- a. Odor Management Plan. The owner and operator of a Tier II processing facility shall implement a Department approved Odor Management Plan designed to minimize malodorous gases. An Odor Management Plan shall include specific operating criteria for oxygen, moisture and temperature levels appropriate for the wastes to be processed and processing technologies to be employed, methods used to maintain the specific operating criteria and a monitoring strategy that includes the frequency and parameters for monitoring the specific operating criteria.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Not Applicable

- b. Documentation Requirement. The owner and operator of a processing facility shall maintain documentation of compliance with this Section, including an operational log of the methods used to maintain the operating criteria and sampling results.

03. **INCINERATORS, CESQG MANAGEMENT FACILITY & TRANSFER STATION OPERATING REQUIREMENTS.** In addition to the requirements specified in section II.01, incinerators, CESQG Management Facility and transfer stations shall also comply with the following operating requirements.

- a. Implement cleaning procedures and waste residency times to maintain sanitary conditions on the surface of the tipping floor. Describe cleaning procedures and waste residency times that will

maintain sanitary conditions on the tipping floor surface.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Not Applicable

- b. Implement and operate a leachate storage or management system.. Describe how the leachate storage or management system will be implemented and operated.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Not Applicable

- c. Waste Tire Collection Site Requirements. Individual tire piles shall not exceed five thousand (5000) square feet of continuous area, nor fifty thousand (50,000) cubic feet in volume or ten (10) feet in height.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Not Applicable

- 04. NON-MUNICIPAL SOLID WASTE LANDFILL OPERATING REQUIREMENTS.** In addition to the requirements specified in section II.01, Non-Municipal Solid Waste Landfills shall also comply with the following operating requirements.

- a. Compaction and placement of waste in locations consistent with the approved operating plan. Describe how the waste will be compact and placed within the landfill. Include equipment used to compact and place waste.
- b. Provision for storage of waste during periods when the NMSWLF is inaccessible. Indicate where and how waste will be stored when the NMSWLF is inaccessible.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 5

- c. Application of a six (6) inch compacted soil cover layer on exposed waste as necessary to prevent nuisance and vector conditions at periods consistent with the approved operating plan. An owner and operator may request that the Department approve an alternate cover that addresses vectors, litter, fire, odor, and scavenging concerns. Describe the application of the six inch compacted soil cover layer. Include frequency of application and how this will address the concern for vectors, litter, fire, odor and scavenging and if materials other than soil will be use.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Operating Agreement, page 5

- d. Placement of an interim cover layer of twelve (12) inches of compacted soil between lifts to provide erosion control and structural stability. An owner and operator may request that the Department approve an alternate interim cover that addresses erosion, and stability for subsequent lifts;
- e. Preservation of existing vegetation where attainable. Describe how existing vegetation will be preserved where attainable.

Information supporting this section of the application can be found in the attached documentation

as follows: (document name, page number, etc.) Operating Agreement, page 5

- f. **(TIER III ONLY)** Maintenance and operation of a leachate collection and control system and air emission control system consistent with the approved design application. Describe how the leachate collection system control system and the air emission control system will be maintained and operated to prevent ground and surface water contamination. Also describe how the air emission control system will be maintained and operated.

Information supporting this section of the application can be found in the attached documentation as follows: (document name, page number, etc.) Not Applicable

I certify that the information contained in this application is true and accurate to the best of my knowledge. If application is prepared by a registered P.E. or P.G., please affix stamp to application.



Signature of owner, operator
Or legally authorized representative

10-25-2016
Date

Valley Waste Disposal, LLC
A Non-Commercial Solid Waste Landfill
Operating Agreement, as of September 30, 2016

Note: This operating agreement contains the information required as stated in Subsection 012.04 of IDAPA 58.01.06.

General: Valley Waste Disposal, LLC, formerly Lewiston Waste Management, henceforth referred to as "The Company" is a tier 2, non-municipal solid waste landfill facility (NMSWLF) located approximately 1 and ¼ miles northeast of Lewiston, Idaho, on the east side of Highway 95 on what is commonly called the Lewiston Hill. See **Attachment A** for property description and maps.

Physical address: 29261 US Highway 95, Lewiston, Idaho 83501

Mailing address: P.O. Box 498, Lewiston, Idaho 83501

Business telephone number: 208-746-8243

Emergency Numbers: Day 208-790-0265, Evening 208-791-5767

Owners: Brian Benedict, (b) (6) [REDACTED]

Donald Benedict, (b) (6) [REDACTED]

Diane Benedict Yates, [REDACTED] (b) (6) [REDACTED]

Valley Waste Disposal, LLC operates on land owned by Benedict Enterprises, Inc. a subchapter S Corporation. The three owners of Valley Waste Disposal, LLC own equal shares of Benedict Enterprises, Inc.

Signage/Security: 0012.03 b and g. There is only one entrance to the facility and that road has a gate that is locked except for business hours when an attendant is on duty. Signage includes the company name, "Valley Waste Disposal", the hours of operation, 8:00 AM to 4:30 PM, Monday thru Saturday, types of waste accepted and an emergency number.

Types of waste excluded: The company specifically will not accept medical waste from any source or any radioactive material. There also will be no speculative accumulation of waste. Other waste types, including Municipal Solid Wastes or household waste, will not be accepted nor will it be comingled with any of the categories (a) thru (g) below with the intent of disposing of at our site.

Volume of Waste: On an average approximately 32 tons are received per day.

Types of waste to be accepted at this site: The waste types accepted at this site are limited to the following Non-Municipal Solid Waste categories:

a) Agricultural Wastes: (Specifically waste crops)

b) Construction/Demolition: Waste building materials, packaging, pallets and rubble resulting from construction, remodeling, repairs or demolition of houses, commercial buildings and other structures. Examples of materials are: roofing, nails, tar paper, untreated woods, plaster, fiberglass, formica, drywall, gypsum, metal, aluminum, light fixtures, wire, plumbing fixtures, pipes, fiberglass insulation, bricks, concrete, masonry materials, rock, untreated lumber from fencing and decks, rebar, paving material, shavings, sawdust, chips, bark, pulp and yard log waste, pilings, particle boards, etc. Furniture, mattresses and carpeting from demolition, remodels, repairs and construction are also accepted from houses, commercial buildings and other structures.

c) Inert Wastes: We accept noncombustible, nonhazardous and non leaching solid wastes such as road building materials, bricks, concrete and clean riprap.

d) Wood waste: Only wood wastes acceptable by the Solid Waste Management Rules, 58.01.06, will be excepted.

e) Yard waste: Examples are stumps, limbs, shrubs, roots, leaves, grass clippings and sod.

is unacceptable, it will be reloaded, rejected and the customer directed to the proper disposal site. Employees will also watch for and stop anyone attempting to salvage.

- g) The occasional tire, or any other unacceptable item, will be disposed of by the company at its own expense to the proper waste location.

Fire Prevention: The water truck will be kept full and ready in case of fire. The fire hoses will be inspected frequently and kept in good working order. Every person in the crew will be trained in running the water truck and using the firefighting equipment. In addition, one dozer will be kept ready in case the landfill needs to have a fire break installed around it. In the event of a grass or landfill fire the supervisor on duty will direct the others in fighting the fire and if necessary call the sheriff's office for assistance.

Hot Spots: In the event of a hot load coming into the landfill the attendant will direct the load to a safe area and immediately notify the supervisor on duty. The supervisor will direct the firefighting and call the Sheriff's office if additional help is needed. After the fire is out, the load will be spread out in a safe area away from the active fill area, watered and monitored for at least a week before being allowed in the fill.

Communication: 0012.3 e As soon as the attendant opens the gate for business, he or she will ensure that the business cell phone is turned on. All employees have cell phones and are in communication with the attendant and each other during business hours.

Scavenging and Salvaging: 0012.3 h. Only employees of the company will be allowed to salvage anything from the dumped materials. (9-28-2011)

Nuisance Control: 0012.3 i. Similar measures are taken to control nuisances including, A. disease & discomfort, B. vector, C. odor, D. litter.

Agricultural products such as wheat, barley, peas and lentil sweepings from grain elevators are the only wastes accepted that might attract rodents or birds or cause odor. They are spread out thinly,

no more than 6 inches deep and covered with dirt before the close of business. Pushing dumped loads frequently minimizes the opportunity for litter to develop. After each wind storm and at least weekly an employee does a litter control.

E. Dust control: During the dry months the landfill areas are watered down with a water truck at the start of each shift and mid-day. In the event of a dust storm or very arid conditions, extra watering is done as needed.

Bird Hazards: 0012.3 j. The company's facility is not near an airport. No garbage or other putrefied material is accepted. See Nuisance Control for how odors from agricultural products are minimized.

Open Burning: 0012.3 k. The company does no open burning.

Storm Water Run Off: 0012.3 1. In 2015, an engineering firm, TD&H Engineering was contacted to develop a Storm Water Management Plan. Their recommendations were implemented in 2015.

See Attached TD&H Engineering Report.

Other Requirements for Tier II Landfills: Per the Non-Municipal Solid Waste Management Facility Operating Plan Approval Application. (Revised 9/12/08) Taken from IDAPA 58.01.06, 0012.11 d.

Waste Placement, Soil Coverage and Compaction: Landfill waste will be added to Cells 1 and 2. Special wastes, Glass and Asbestos, will be taken to specific areas away from the landfill cells. See notations on **Attachment A.**

Compaction: As the loads are received they will routinely be compacted at the face of the cell with a wheel loader. When a lift is wide enough to run a machine on, six inches of soil will be added and all will be compacted with a crawler tractor or excavator. Twelve inches or more of compacted soil will be added between lifts to provide erosion control and structural stability. Covering will be done as required to control nuisances and to facilitate future dumping while conserving soil and space. This could be done daily or usually within a week. In all cases covering of all surfaces will be done within 30 days.

Winter Conditions: During winter conditions, the landfill will have access roads and one cell area rocked, graded and accessible at all times. The covering of fill in the winter will be done during dry periods or during freezing periods.

Storm Water Controls: The storm water which may accumulate on the phase I and phase I expansion area, has been bermed and graded to direct storm water to the existing inlet and conveyance pipe at the west side of the site and channeled to run to pond A. Overflows from pond A will flow to pond B. Pond B will drain thru a pipe and will run to a natural drainage channel. The

lower level or phase II is bermed and graded to direct all storm water accumulation to a temporary pond. The company has been granted permission to expand phase II. Upon completion of the phase II expansion project the area will be bermed and graded so storm water will drain to a permanent pond located at the southwest corner of the landfill site. **See Attached TD&H Engineering Report, Map #1.**

Provision for Storage: Waste will be put in the landfill or taken to a specific area as appropriate on its arrival. There is no designated storage area except for crushed glass the Company uses on its internal road system. Other waste is processed the day it arrives.

Preservation of existing Vegetation: The native vegetation is preserved by restricting equipment and vehicle access to prepared roads and active landfill areas. Noxious weeds are controlled by spraying when necessary. On closure, seed for an appropriate and hopefully native, ground cover will be spread over area.

Physical Description of Landfill

Attachment A

This (NMSWLF) is located approximately 1 and $\frac{1}{4}$ miles northeast of Lewiston, Idaho, on the east side of Highway 95 on what is commonly called the Lewiston Hill. The NE $\frac{1}{4}$ of section 29, township 36 north of range 5 west of the Boise Meridian, east of Highway 95.

The site is approximately 40 acres situated on a very dry hillside. The lowest elevation at the site is 1020 feet which is 290 feet higher than the Clearwater River at full pool. There are no water courses such as lakes, reservoirs or canals in the area. The landfill is bermed with soil at the edge and has a drainage system to contain rainwater. Prevailing winds are from the southwest.

See Attachment C

The site is miles from any historical site and there are no houses in adjacent parcels. To the northeast is a cattle feed lot and wheat fields. To the southeast is a wheat field and rock pit. To the southwest is Highway 95 and more wheat fields. There is fencing along the Highway 95 right of way. To the northwest are more wheat fields.

An Idaho Wildlife Biologist reviewed the area and said the landfill presented no danger to endangered or threatened species.

Utilities at the landfill site include electricity that has been brought in from the south on the western boundary of the site. A high tension power line about 800 feet north of the landfill runs east to west. A natural gas line pipe also follows the western boundary of the site, from the south, and runs to the northwest corner of the property.

There are no permanent structures at the site but there are five portable sheds used to house tools and spare parts and a mobile office for customers to check-in at the scale site. **See Map A1**

Asbestos Management

Attachment B

Management practices comply with Environmental Protection Agency 40 CFR 61.

Types of non-friable asbestos the company accepts include: roofing and siding materials, attic and wall insulation, insulation containing vermiculite, vinyl floor tiles and the backing on vinyl sheet flooring and adhesives, textured paint and patching compounds used on walls and ceilings, walls and floors around wood burning stoves protected with asbestos paper, millboard or cement sheets, hot water and steam pipes coated with asbestos material or covered with asbestos blanket or tape, oil and coal furnaces and door gaskets with asbestos insulation, heat resistant fabrics, asbestos paper and cement products and packaging.

Asbestos to be accepted must arrive with a shipping manifest describing the waste, where it came from, etc. It must be double sealed in leak proof wrapping, such as 6 mil poly or be in air tight containers. It must be wet down as necessary.

Upon arrival, the company will check the manifest for discrepancies, log in the appropriate information and direct the driver to a designated area for dumping. OSHA rules will be followed for the sake of our worker's safety. The waste will be covered with 6" of soil as soon as possible but no later than within twenty-four hours. Based on environmental conditions the area may be watered down and/or more soil added between shipments.

This site can only be reached when accompanied by a company employee from the check in booth. The road to the booth is blocked with a locked gate except during business hours. There will be no re-excavation of this site.

The company will maintain waste shipment records for at least ten years or until the business ceases. Discrepancies with the yardage/tonnage or waste between our records and the shipping manifest will be reported immediately to the EPA in writing or by calling Nez Perce County Public Health.

The asbestos site will be identified by GPS coordinates and is marked on the map accompanying the property description in **Attachment A**. Records of the location, depth and quantity in cubic yards or tonnage will be maintained on site until closure. Upon closure provisions of 61.151 will be met. A copy of all the records of asbestos waste disposal at this facility will then be provided to the appropriate agencies.

Storm Water Drainage

Attachment C

Valley Waste Disposal, LLC contacted an engineering firm, TD&H Engineering in 2015 to propose an ongoing storm water management plan. Their report is attached.

There is one area of active land filling, phase II (4.5 acres). A phase II expansion area (1.2 acres) is in progress for future fill area. Berms of excavated soil surround the perimeter of the phase II processing deck on the east and south perimeters to prevent runoff from discharging down fill slopes. Sloping via grading and berms also direct water to a temporary pond. **See Map #1.**

Grading activities will be tailored to maintain a positive slope toward the pond. BMP's (Best Management Practices) will be inspected weekly and after each storm event and repaired or modified as necessary.

The temporary sedimentation pond will be cleaned out as needed to maintain the storage volumes that are indicated in the TD&H Engineering report. They effectively slow peak runoff rates and filter and trap sediment.

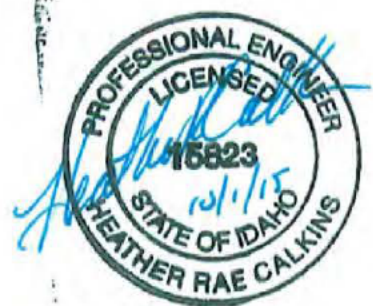
A proposed permanent pond (Min 985 CF of storage volume) will be constructed and maintained when the phase II expansion project is completed. **See Map #2.**

Project Identification: **Storm Water Management Plan (SWMP)**

Date: October 1, 2015

Owner: Valley Waste Disposal, LLC
Attention: Gloria Hammock
29261 US Highway 95
Lewiston, Idaho 83501
(208) 746-8243

Engineer: TD&H Engineering
210 Main Street
Lewiston, Idaho 83501
(208) 746-0938
Heather Calkins, P.E., heather.calkins@tdhengineering.com



1. Purpose:

This SWMP is required as part of the Operating Plan per the Idaho Administrative Code, Idaho Department of Environmental Quality (IDEQ), IDAPA 58.01.06.012.03.L., Solid Waste Management Rules. The intent of this rule is to prevent contamination of surface and ground water, and prevent the spread and impact of contamination beyond the boundary of the facility. The Plan must include a Site Plan showing the locations for Best Management Practices (BMP's) currently in use, and any proposed BMP's to improve storm water controls at the facility.

2. Narrative

Valley Waste Disposal, LLC (VWD) operates a Tier II Non-Municipal Solid Waste Landfill Facility (NMSWLF) as defined by the Idaho Department of Environmental Quality. This facility accepts non-hazardous waste materials for processing and disposal. The waste products that the facility receives are dumped in regulated areas, broken up and then compacted into layers with each layer being capped with native material. The VWD Operating Plan fully describes the facility's processes.

VWD is owned and operated by the Benedict Family. It is located approximately 1 mile northeast of the city of Lewiston, Idaho and just east of US Highway 95 on what is commonly known as the Lewiston Hill. The operation covers approximately 9.0 acres and is surrounded by farmland and native, undeveloped land, much of which is also owned by the Benedict family. The landfill has been operating since 1986 and has two distinct areas: Phase I and Phase II (refer to Figure 1).

Phase I Long Term Plans

The Phase I site is currently under lease to Knife River Corporation who is operating an asphalt plant at the site for use with a nearby construction project. It is anticipated that they will continue to lease the site for the foreseeable future.

Currently, the Phase I site has reached its design capacity and is not receiving and processing waste at this time. However, excavation is currently being done to the north of the Phase I site in anticipation of expanding the allowable dumping area. VWD is currently working through the permitting process for expanding the footprint to include this area.

Phase II Long Term Plans

The Phase II site has not yet reached its design capacity and continues to receive and process waste per the Operating Plan. Expansion of this site's footprint is also being planned for. VWD is working through the permitting process to expand the footprint of the allowable dumping area to the west.

3. Storm Water Management Controls

SWMP Administrator – Brian Benedict and Diane Stephens, President and Owners of VWD, are responsible for implementing, maintaining, and revising the SWMP. Kurt Wood, Landfill Manager, is in charge of day to day operations at the facility and assists in implementing the Plan.

Identification of Potential Pollutant Sources

Potential sources of pollutants at the site from delivered waste include sediments and dust, waste crop residue (sweepings) with trace amounts of pesticide/fertilizer, trace amounts of heavy metals from rusting nails and miscellaneous metals in construction debris, and incidental quantities of treated wood which are acceptable per NMSWLF rules. Potential pollutants include fluid leaks and spills from equipment used to process waste, which includes a large and a small front end loader, a tracked hydraulic excavator, and a bulldozer. Fuel at the site includes up to 200 gallons of diesel fuel for the equipment, which is stored at the site in a towable fuel container. Up to 40 gallons of lubricants and hydraulic oils in plastic containers, and a few spray cans of cleaning fluids, are kept inside a small shed.

Management practices to minimize storm water contamination

Operating staff at the facility is limited to Kurt Wood – Landfill Manager, Gloria Hammack – Office Manager, and Myron Calkins – Equipment Operator. Delivered waste is thoroughly screened for unacceptable materials and rejected if any is found. The diesel container is filled by a fuel vendor on site, and minor maintenance of vehicles

such as oil changes is limited to a designated area with drip pans in use. Major maintenance is done off site at a commercial facility. A spill kit consisting of absorbent pads and floor dry is kept on site. There is no evidence of drips or leaks from machinery or vehicles. Watering of roads and work areas occurs during dusty summer periods, and vehicle tires are cleaned of mud and debris before leaving the site as needed during wet weather. Garbage is picked up daily and placed in designated containers. All areas are informally inspected daily and kept in neat and orderly condition. Waste is processed, compacted and covered with fill material promptly, and there is usually only a few hundred square feet of waste material exposed at any given time except for wet periods when it becomes too muddy to process waste. The deck floor is graded daily, and earthen berms are placed around the perimeter to control run-off. A complete list of operating practices is found in the Operating Plan.

4. Discussion of Storm Water Components and Existing Storm Water BMP's

Phase I Landfill (3.5 acres)

Phase I is situated at the north side of the facility and is currently occupied by the Knife River asphalt plant operation. The deck floor has been leveled out, but the adjacent property is moderately steep with slopes of 2:1 to 1:1. Drainage predominately runs north to south. In addition to site-generated storm water run-off, Phase I also receives a limited amount of storm water run-on from the west and northwest where it is adjacent to Highway 95.

Storm water Run-off

Previous storm water plans have been completed for the Phase I run-off with the intent of collecting and conveying storm water to a retention pond (Pond B) by use of storm water BMP's including: berms, site grading and drainage pipe. However, the Knife River operation has changed the phase I landscape to the extent that the storm water BMP's are no longer functioning as intended.

The intent of the previous storm water plan and BMP's was to have the Phase I landfill deck graded to drain to the west and into a sedimentation pond (Pond B). Berms were to be constructed around the perimeter of the site to prevent run-off from discharging down the fill slopes. Through the implementation of berms and site grading, storm water would be directed to an inlet where it would be collected and then conveyed down an embankment by means of a 12" HDPE culvert and into Pond B. Pond B is rectangular shaped, excavated into native soil, and is approximately 60 ft. long by 20 ft. wide. The pond has an approximate storage volume capacity of 2,160 cf. There is a

sealed 18" HDPE pipe at the south end of the pond which has a 6" diameter overflow port cut into the top. Once storm water builds to the depth of the overflow outlet, it enters the 18" culvert which is piped under the access road approximately 80 feet. This 18" pipe then discharges into a well-established vegetated drainage ditch (Channel A). This ditch flows approximately 1,000 feet before leaving the Owner's property.

As mentioned, the Knife River operation has changed the landscape at the Phase I site so that the site is no longer adequately graded to drain to the inlet at the west. In addition, the perimeter berms have been eroded and worn away over time. Storm water will currently pond within the landfill deck area and has potential to be discharged from the site to the south and east.

Storm water Run-on

The minimal amount of storm water run-on that enters the property from Highway 95 to the north and west flows along the vegetated roadway ditch and down a steep rocky ditch onto the property. Storm water is intercepted at the toe of the highway fill slope by a 120'x10' wide rectangular sedimentation pond (Pond A). This pond has 1:1 slopes excavated into native soil and provides an approximate storage volume capacity of 1,200 cf. Pond A's outlet is a 24" CMP culvert with the invert located 1 foot above the pond bottom. This culvert crosses under an access road and discharges into Pond B located to the southeast.

The Phase I BMP for controlling run-on storm water (Pond A with overflow to Pond B) is still functioning as intended.

Phase II Landfill (4.5 acres)

Phase II is primarily affected by site-generated storm water run-off. The site is currently graded to direct water to a "temporary" storage pond located at the north side of the fill site. It is considered a temporary pond because the site landscape is continuously changing as material is dumped and compacted and as additional area is excavated. As the landscape changes, VWD personnel regrade the site to maintain positive drainage towards the storage pond and also reconstruct and/or relocate the temporary pond as necessary. The site also has berms around the perimeter that are intended to keep potential run-off from leaving the site.

The site BMP's for Phase II are functioning well and are directing storm water to the temporary pond as intended.

5. Phase I Landfill Storm Water Analysis and Recommendations

Existing Conditions

Generated run-off volumes and the required storm water storage capacity for the Phase I site have not changed since the previous storm water plans. Therefore, the storm water ponds (Ponds A & B) and associated conveyance piping will not require any modifications and can continue to function as intended as long as the storm water is directed to them. In order to convey storm water to Pond B, the following improvements must be made:

- 1) The landfill deck (where Knife River is currently operating) must be regraded to direct storm water to the existing inlet and conveyance pipe at the west side of the site.
- 2) Berms must be reestablished at the perimeter of the site in order to prevent run-off from leaving the site.

Refer to Figure 2 within the Appendix for the proposed BMP's to be installed.

Future Expansion

Once VWD obtains the necessary permits to expand the footprint of the Phase I dumping area to the north, they will need to implement additional BMP's for controlling storm water. The following BMP's should be implemented:

- 1) Construct berms at all upgradient locations along the perimeter of the expanded footprint to prevent run-off from leaving the site.
- 2) Construct a small storm water pond (Pond C) at the northwest corner of the expanded footprint area to collect and store run-off and sediment. The minimum storage capacity of the pond is 346 cf in order to store run-off from a 2-year storm event. Refer to the Appendix for the storage volume calculations. To be conservative, a 20'x20'x1' deep pond could easily be constructed which would provide additional storage volume while still maintaining a relatively small footprint. The pond should be constructed with 1' of freeboard.

Refer to Figure 3 within the Appendix for the proposed BMP's to be implemented as part of the future landfill expansion of the Phase I site.

6. Phase II Landfill Storm Water Analysis:

Existing Conditions

The existing BMP's at the Phase II site are currently functioning very well and are preventing storm water run-off from being discharged to the site. The following BMP's should continue to be monitored to ensure proper storm water management:

- 1) Continue to re-grade the landfill deck after waste is dumped, compacted & leveled in order to provide drainage to the pond at the south.
- 2) Continue to maintain the temporary pond at the south side of the site. This includes removing sediment as necessary to ensure adequate storage volume.
- 3) Continue to maintain berms at the perimeter of the site to prevent run-off from leaving the site.

Refer to Figure 2 within the Appendix for the existing BMP's that should be maintained.

Future Expansion

Once VWD obtains the necessary permits to expand the footprint of the Phase II dumping area to the west, they will need to implement additional BMP's for controlling storm water. The following BMP's should be implemented:

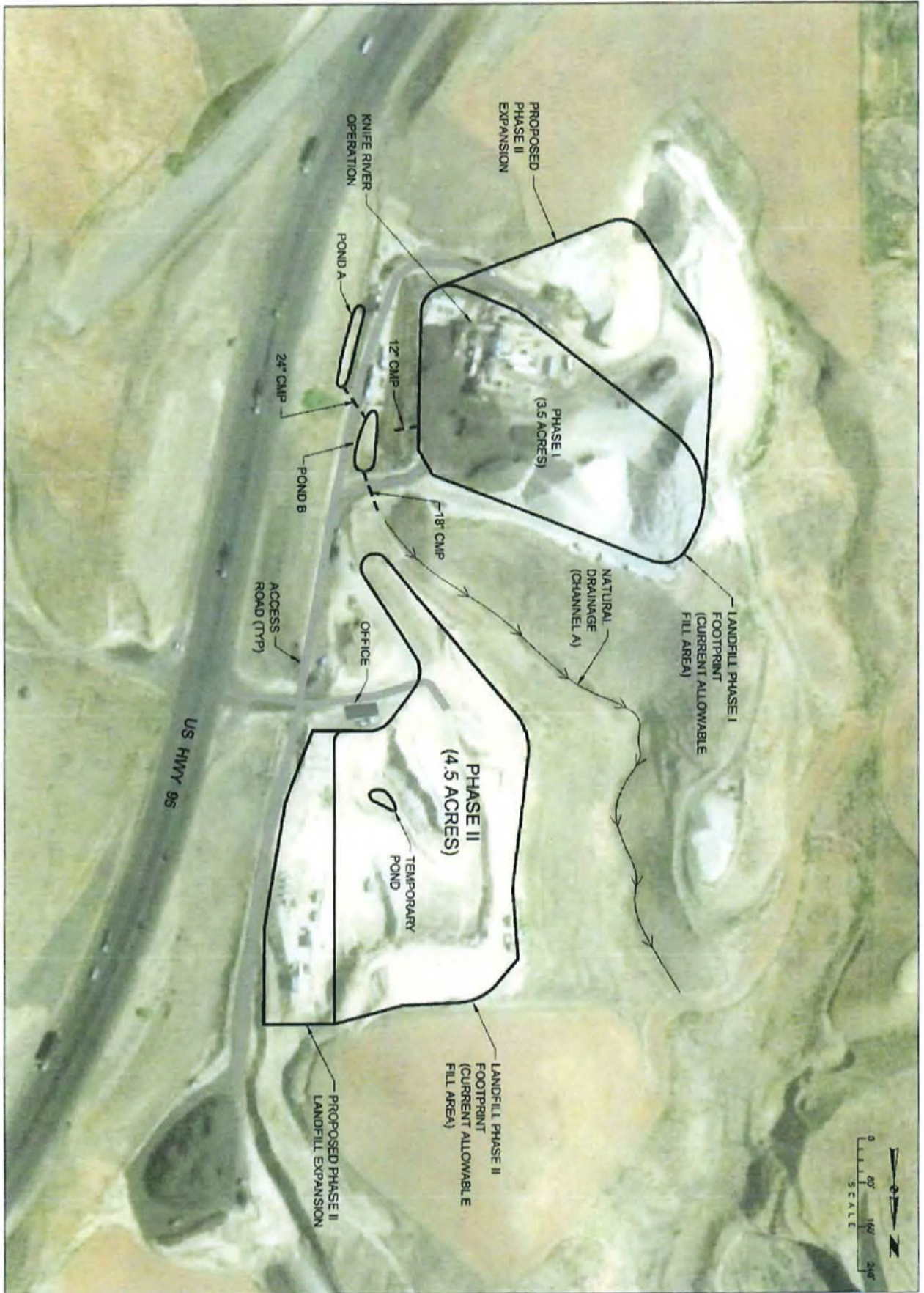
- 3) Construct berms at all up-gradient locations along the perimeter to prevent run-off from leaving the site.
- 4) Construct a small storm water pond (Pond D) at the southwest corner of the expanded footprint area to collect and store run-off and sediment. The proposed pond will require a storage capacity of 985 cf on order to store run-off from the the 2-year storm event. Refer to the Appendix for the storage volume calculations. An 80'x15'x1' deep pond would provide adequate storage. The pond should be constructed with 1' of freeboard.

Refer to Figure 3 within the Appendix for the proposed BMP's to be implemented as part of the future landfill expansion of the Phase II site.

7. General recommendations for all landfill areas

All BMP's, including the ponds and berms, should be inspected weekly or after each storm event and repaired and modified as necessary. As the landfill landscape changes due to additional dumping, grading activities should continue so that storm water is

directed toward the retention ponds. The ponds should be cleaned out as needed to maintain adequate storage volume. This Storm Water Management Plan should be reviewed and revised as necessary whenever the Operating Plan changes, before changes occur to the working face of the landfill, and prior to final closure of the dumping sites so that appropriate BMP's are employed in a timely fashion.



SHEET 1

STORMWATER MANAGEMENT PLAN
VALLEY WASTE DISPOSAL, LLC - LEWISTON, ID

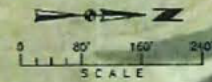
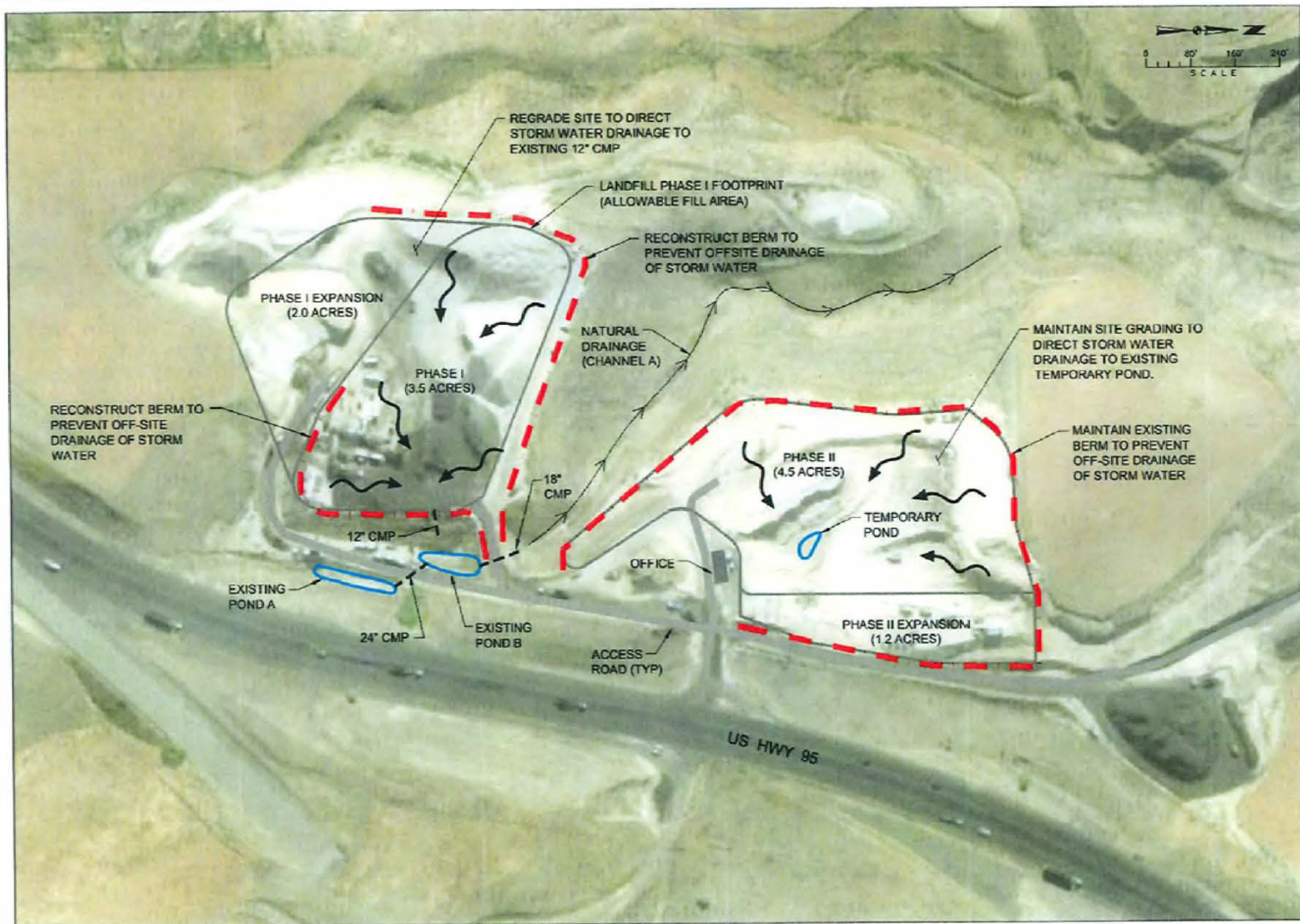
EXISTING SITE PLAN

TD&H
Engineering

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PROJECT: [blank]



FILE DATE REVISION



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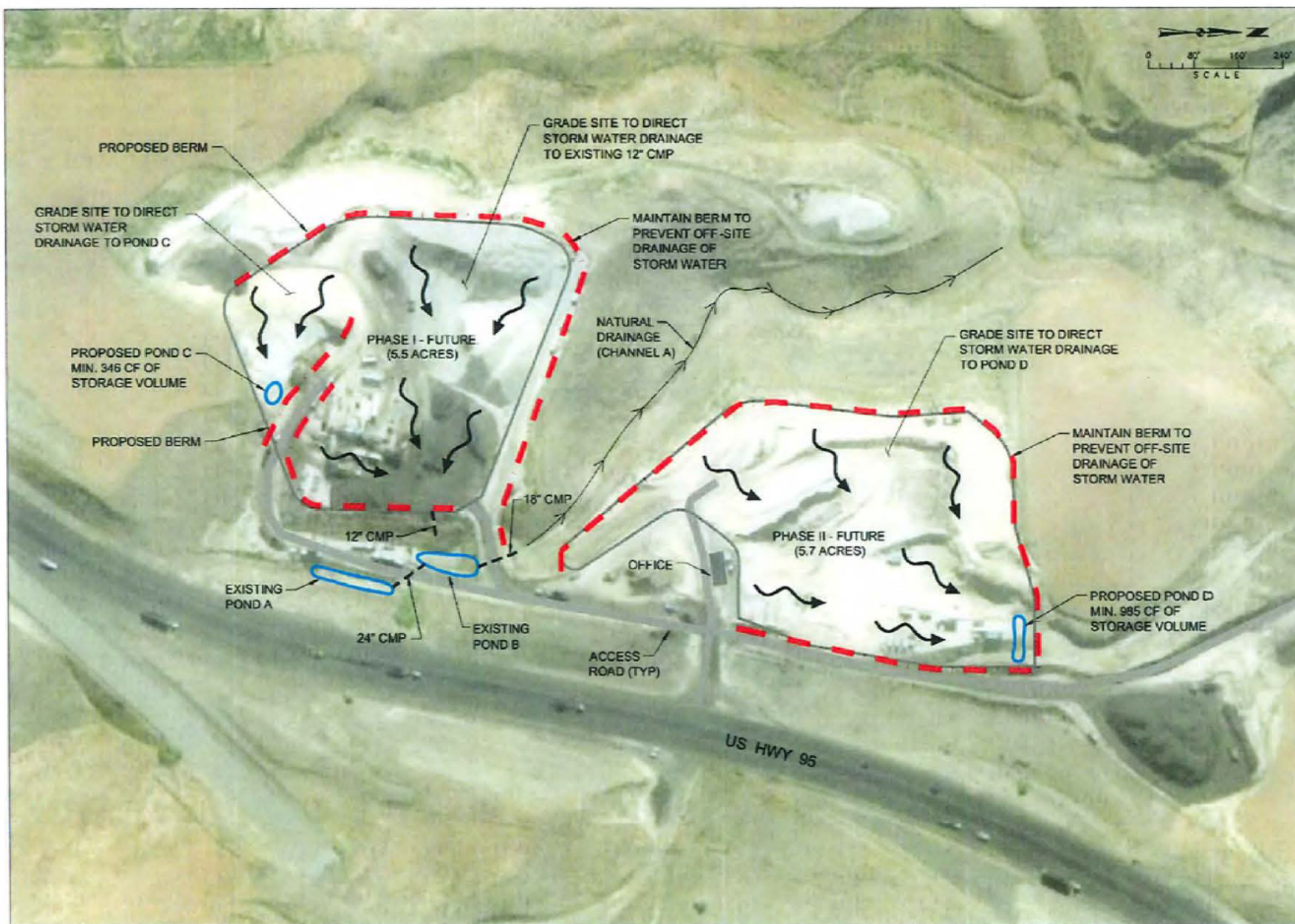
STORMWATER MANAGEMENT PLAN
 VALLEY WASTE DISPOSAL, LLC - LEWISTON, ID

STORMWATER MANAGEMENT PLAN

EXISTING MAP DATE: 12/08

SHEET 2

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DRAWN BY: HRC/JDM
 DESIGNED BY: HRC
 QUALITY CHECK: HRC
 DATE: 1/10/2019
 JOB NO. 170488
 PLOT: 03/08/2020

STORMWATER MANAGEMENT PLAN
 VALLEY WASTE DISPOSAL, LLC - LEWISTON, ID

STORMWATER MANAGEMENT PLAN - FUTURE EXPANSION

APPENDIX
STORM WATER CALCULATIONS



STORM WATER STORAGE REQUIREMENTS

RATIONAL METHOD $\rightarrow Q = CIA$

where Q = PEAK discharge, cfs

C = Runoff Coefficient

I = Rainfall Intensity, in/hr

A = Area, acres



$$V = Q \cdot T$$

where V = storm water volume, cf
 T = storm duration, min

$C = 0.12$ \leftarrow City of Lewiston Stormwater Policy and Design Manual, Table B-4 w/soil type B and average slopes.

$I = 0.4$ in/hr \leftarrow IDF Curve for 2-year, 1-hour storm event
CITY OF LEWISTON MANUAL.

$A_{\text{phase I}} = 2.0$ acres (expanded footprint only for sizing Pond C)

$A_{\text{phase II}} = 5.7$ acres (existing : expanded footprint for sizing Pond D)

$T = 3600$ sec. (1-hour storm)

$$V_{\text{phase I pond C}} = (0.12)(0.4)(2.0)(3600) = 345.6 \text{ cf} \approx \boxed{\text{POND C } 346 \text{ cf}}$$

$$V_{\text{phase II pond D}} = (0.12)(0.4)(5.7)(3600) = 985.0 \text{ cf} \quad \boxed{\text{POND D } 985 \text{ cf}}$$

Parks and Cemeteries	0.10-0.25
Playgrounds	0.20-0.35
Railroad Yard Areas	0.20-0.40
Unimproved Areas	0.10-0.30
Generally Accepted for Lewiston	0.20
Landscaped Areas	0.20

Table B-4. Recommended "C" Values for Soil Hydrologic Groups, Well-Vegetated Conditions i.e., Pervious Surfaces, Different Slopes.

Slope	Percent	A Soils	B Soils	C Soils	D Soils
Flat	0-2%	0.04	0.07	0.11	0.15
Average	2-6%	0.09	0.12	0.15	0.20
Steep	>6%	0.13	0.18	0.23	0.28

Table B-5. Values of Ground Cover Coefficient K

Cover or Channel Type	Size	K
Forest with heavy ground cover		150
Minimum tillage cultivation		280
Short pasture grass or lawn		420
Nearly bare ground		600
Small roadside ditch w/ grass		900
Paved area		1,200
Gutter flow	4 in. deep	1,500
	6 in. deep	2,400
	8 in. deep	3,100
Storm sewer	12 in. diameter	3,000
	18 in. diameter	3,900
	24 in. diameter	4,700
Open channel flow (n = 0.40)	1 ft. deep	1,100
In a narrow channel (w/d = 1)	2 ft. deep	1,800
	4 ft. deep	2,800
Open channel flow (n = 0.40)	1 ft. deep	2,000
In a wide channel (w/d = 9)	2 ft. deep	3,100
	4 ft. deep	5,000

Source: WSDOT Hydraulics Manual, January 1997

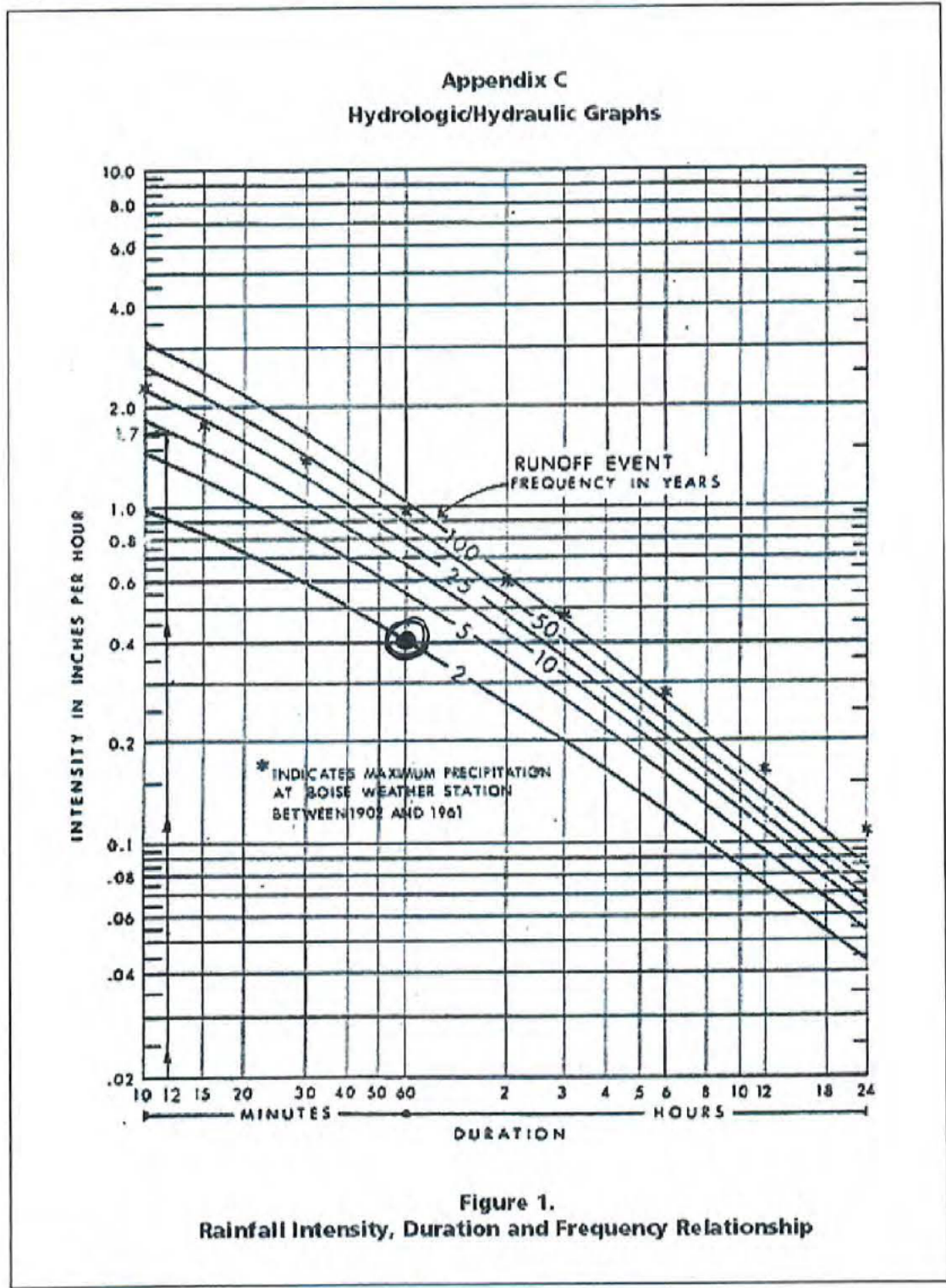
D. Peak Discharge Rate (TR-55 Method)

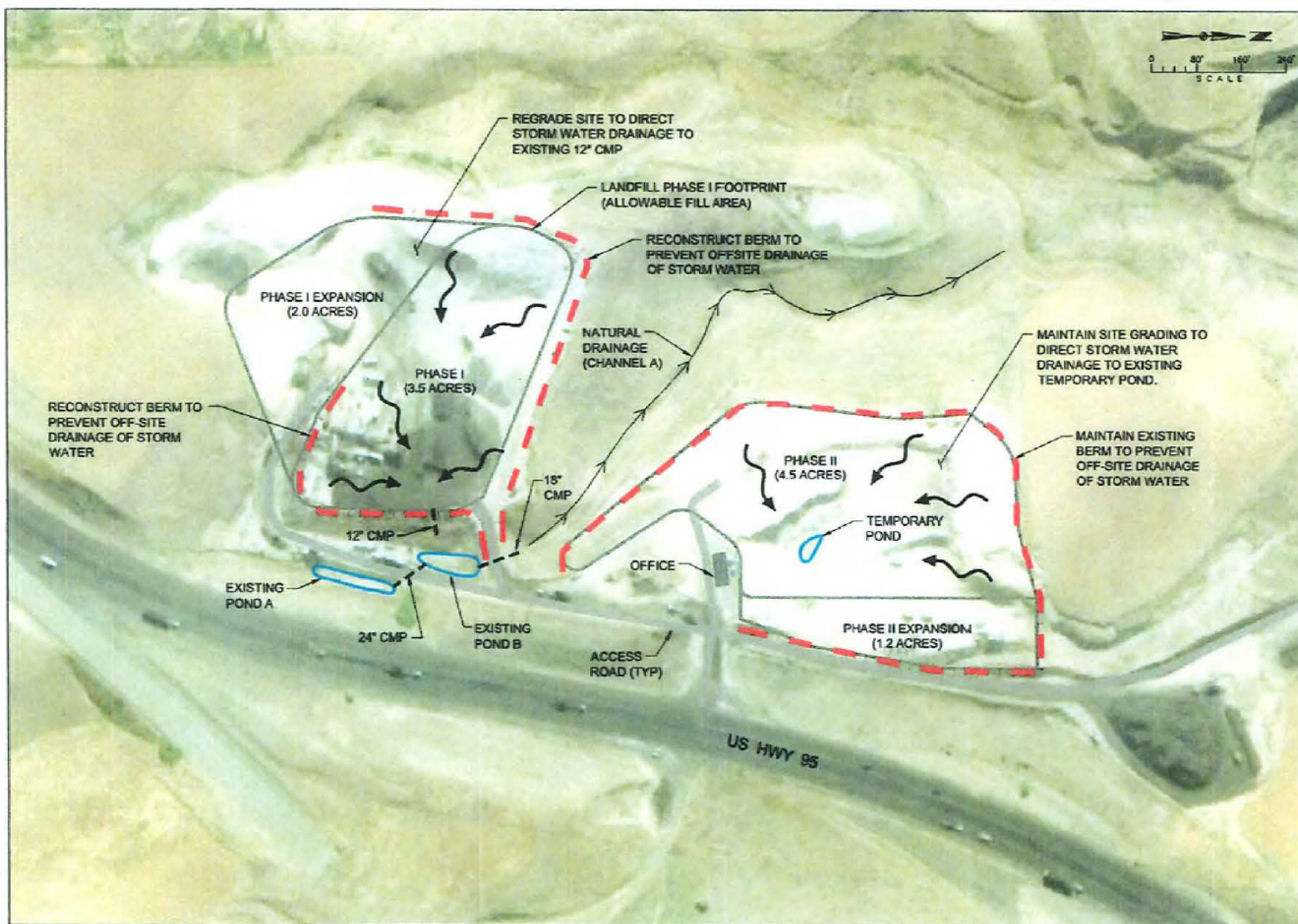
Calculate Peak Discharge Rate (Q_p) for the site.

$$(a) Q_p = (Q_u) * (A) * (R) * (F_p)$$

Appendix C
Reference Graphs and Tables

Figure 1. Rainfall Intensity, Duration, and Frequency Relationship





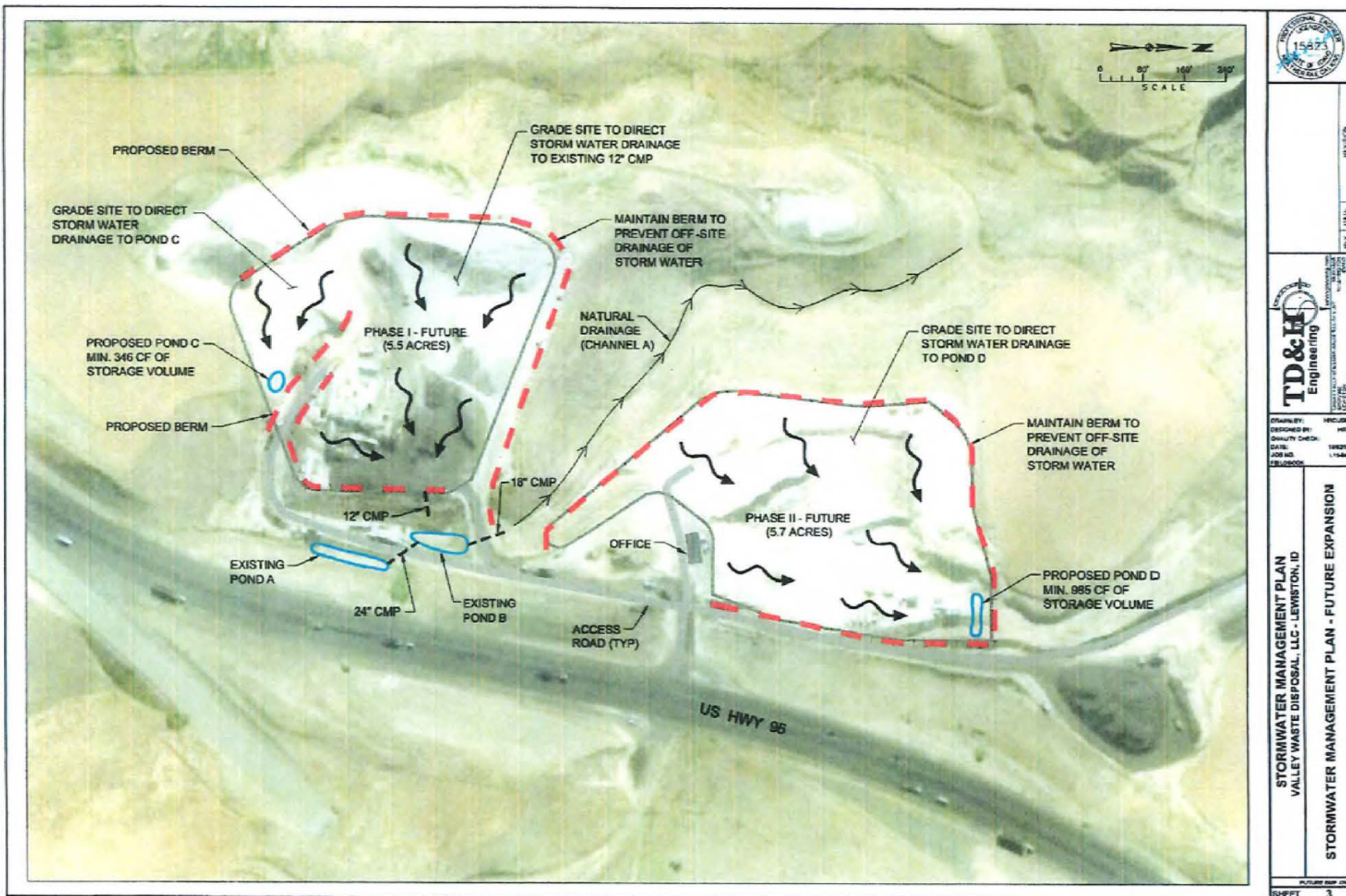
DAVID L. TAYLOR
15823
CIVIL ENGINEER
STATE OF CALIFORNIA



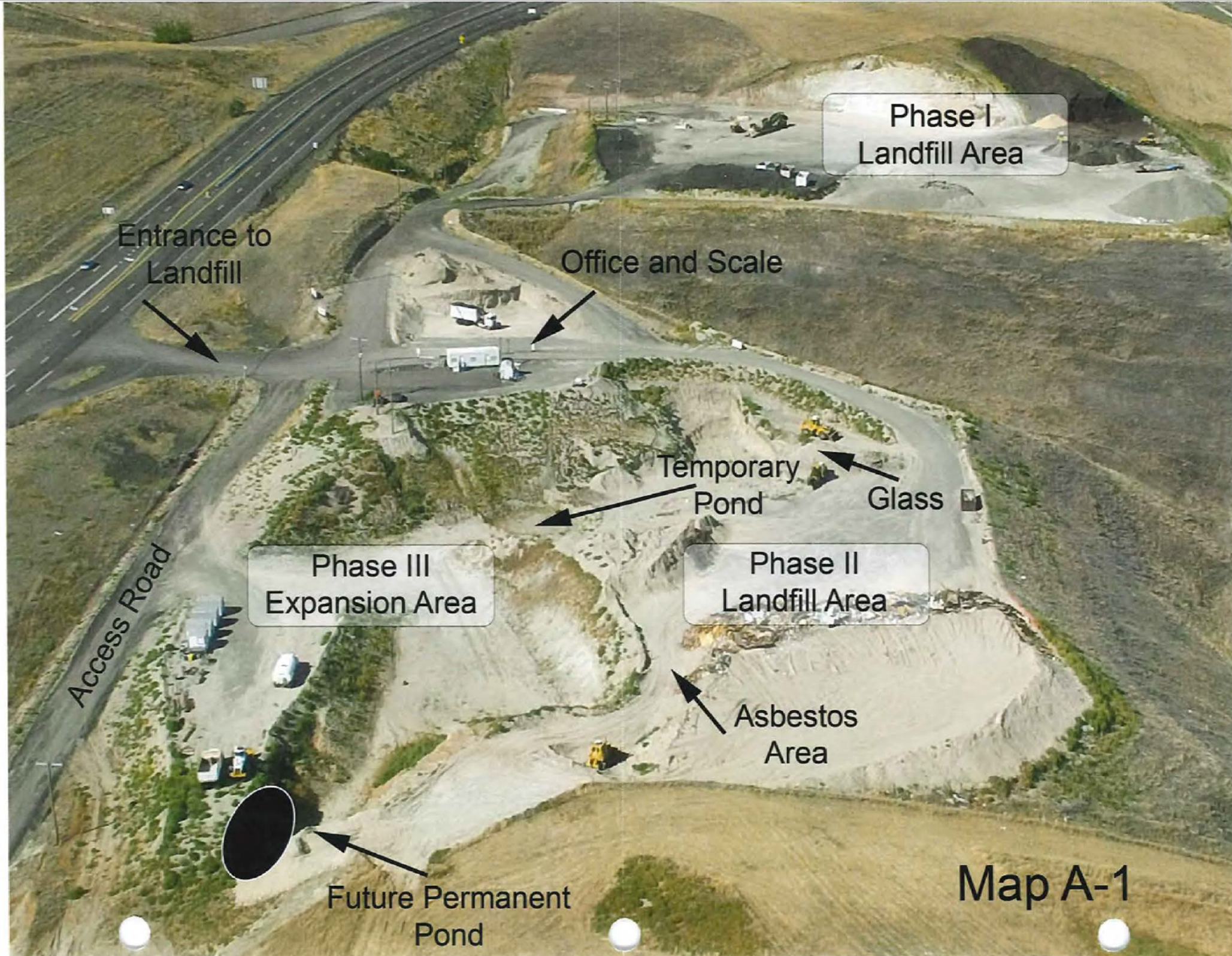
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DATE: 10/2/13
JOB NO.: 175440
SHEET NO.: 2

STORMWATER MANAGEMENT PLAN
VALLEY WASTE DISPOSAL, LLC - LEWISTON, ID

STORMWATER MANAGEMENT PLAN



#2



Phase I
Landfill Area

Entrance to
Landfill

Office and Scale

Temporary
Pond

Glass

Phase III
Expansion Area

Phase II
Landfill Area

Asbestos
Area

Future Permanent
Pond

Map A-1

N 46.43956°
W 116.98301°

Phase II

N 46.43959°
W 116.98433°

N 46.43867°
W 116.98311°

N 46.43846°
W 116.98331°

N 46.43841°
W 116.98410°

Asbestos

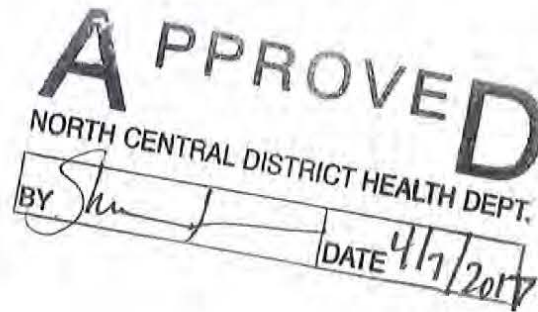
MAP
A2

Valley Waste Disposal, LLC
29261 Highway 95
Lewiston, Idaho 83501
208-746-8243

March 29, 2017

North Central Health District
215 10th St.
Lewiston, Idaho 83501

Attention: Sherise Jurries



Amendment to Operating Plan Pertaining to the Non-Friable Asbestos Pit

We would like to submit a request for the following changes to our operating plan. Valley Waste Disposal follows the Standards for Active Waste Disposal Sites, 40 CFR 61.154. (See Attached).

The pits indicated in the designated area of our current plan for non-friable asbestos are full. We would like to relocate to the north of the designated area as shown on the attached map. This has been identified on the map by GPS co-ordinances and as Asbestos Area B, pit D. (See attached Map B1).

BMP's will continue to be implemented for controlling storm water events with special attention to the asbestos area. All aspects of the code of Federal Regulation, 40 CFR 61 Subpart M, National Emissions Standards for Asbestos, will continue to be followed. We will continue to log incoming loads, maintain shipping manifests and report discrepancies of yardage, immediately, in writing to EPA or Public Health. The site will only be reached by drivers when accompanied by a company employee. Waste will be wet down as needed and covered with 6" of soil immediately, but not more than 24 hours after its arrival. There will be no re-excavating of the designated site.

Examples of types of non-friable asbestos accepted include: roofing, siding materials, attic and wall insulation, insulation containing vermiculite, vinyl floor tiles, backing on vinyl flooring, adhesives, textured paint, patching compounds used on walls and ceilings, walls and flooring used around wood burning stoves protected with asbestos paper, millboard or cement sheets, hot water and steam pipes coated with asbestos material or covered with asbestos blanket or tape, oil and coal furnace door gaskets with asbestos insulation, heat resistant fabrics, asbestos paper, cement products, packaging and soils that may have been contaminated with asbestos.

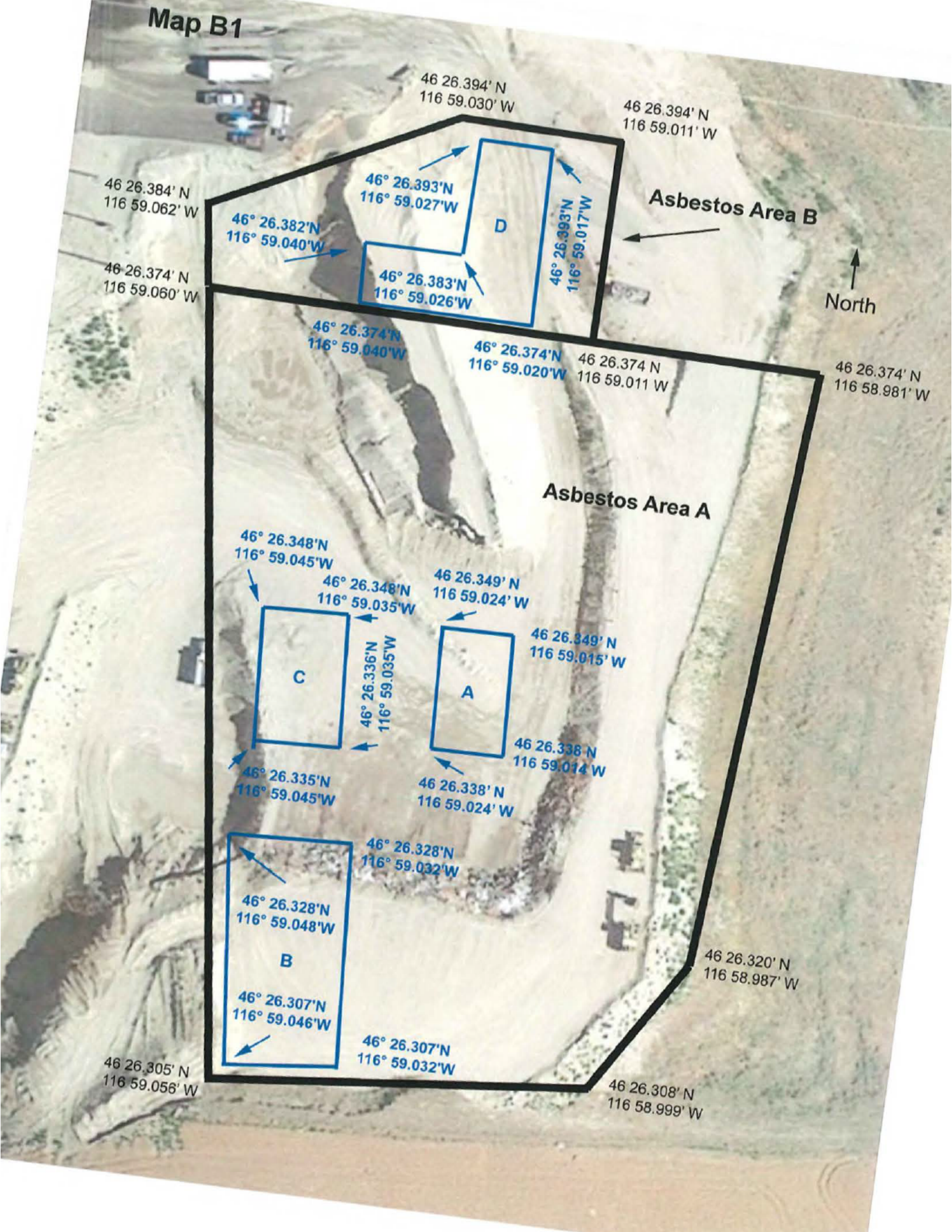
Records of the location, depth and quantity, in cubic yards, will be maintained on site until closure. Upon closure of the landfill we will comply with the standards for Inactive Waste Disposal Sites, 40 CFR 61.151 (See Attached), and submit a copy of these records to the administrator.

Sincerely,

A handwritten signature in dark ink, appearing to read "Don Stephens".

President, Valley Waste Disposal, LLC

Map B1



(C) The date of each determination of the maximum concentration point, as described in § 61.139(h), and a brief reason for the determination.

(ii) For each vapor incinerator, the date and duration of each exceedance of the boundary parameters recorded under § 61.139(i)(6) and a brief description of the corrective action taken.

(iii) For each vapor incinerator, the date and duration of each period specified as follows:

(A) Each period recorded under § 61.139(i)(7)(i) when the vent stream is diverted from the control device or has no flow rate;

(B) Each period recorded under § 61.139(i)(7)(ii) when the vent stream is diverted from the control device; and

(C) Each period recorded under § 61.139(i)(7)(iii) when the vent stream is diverted from the control device, when the car seal is broken, when the valve is unlocked, or when the valve position has changed.

(iv) For each vapor incinerator, the owner or operator shall specify the method of monitoring chosen under paragraph (f)(2) of this section in the first semiannual report. Any time the owner or operator changes that choice, he shall specify the change in the first semiannual report following the change.

[56 FR 47407, Sept. 19, 1991, as amended at 64 FR 7467, Feb. 12, 1999; 65 FR 62157, Oct. 17, 2000]

Subpart M—National Emission Standard for Asbestos

AUTHORITY: 42 U.S.C. 7401, 7412, 7414, 7416, 7601.

SOURCE: 49 FR 13661, Apr. 5, 1984, unless otherwise noted.

§ 61.140 Applicability.

The provisions of this subpart are applicable to those sources specified in §§ 61.142 through 61.151, 61.154, and 61.155.

[55 FR 48414, Nov. 20, 1990]

§ 61.141 Definitions.

All terms that are used in this subpart and are not defined below are given the same meaning as in the Act and in subpart A of this part.

Active waste disposal site means any disposal site other than an inactive site.

Adequately wet means sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Asbestos means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

Asbestos-containing waste materials means mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this subpart. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.

Asbestos mill means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

Asbestos tailings means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

Asbestos waste from control devices means any waste material that contains asbestos and is collected by a pollution control device.

Category I nonfriable asbestos-containing material (ACM) means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II nonfriable ACM means any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Commercial asbestos means any material containing asbestos that is extracted from ore and has value because of its asbestos content.

Cutting means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

Emergency renovation operation means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by non-routine failures of equipment.

Fabricating means any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites (field fabricating) for the construction or restoration of facilities. In the case of friction products, fabricating includes bonding, debonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.

Facility means any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a

residential structure, installation, or building. Any structure, installation or building that was previously subject to this subpart is not excluded, regardless of its current use or function.

Facility component means any part of a facility including equipment.

Friable asbestos material means any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Fugitive source means any source of emissions not controlled by an air pollution control device.

Glove bag means a sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove bags provide a small work area enclosure typically used for small-scale asbestos stripping operations. Information on glove-bag installation, equipment and supplies, and work practices is contained in the Occupational Safety and Health Administration's (OSHA's) final rule on occupational exposure to asbestos (appendix G to 29 CFR 1926.58).

Grinding means to reduce to powder or small fragments and includes mechanical chipping or drilling.

In poor condition means the binding of the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

Inactive waste disposal site means any disposal site or portion of it where additional asbestos-containing waste material has not been deposited within the past year.

Installation means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

Leak-tight means that solids or liquids cannot escape or spill out. It also means dust-tight.

Malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.

Manufacturing means the combining of commercial asbestos—or, in the case of woven friction products, the combining of textiles containing commercial asbestos—with any other material(s), including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

Natural barrier means a natural object that effectively precludes or deters access. Natural barriers include physical obstacles such as cliffs, lakes or other large bodies of water, deep and wide ravines, and mountains. Remoteness by itself is not a natural barrier.

Nonfriable asbestos-containing material means any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Nonscheduled renovation operation means a renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience, but for which an exact date cannot be predicted.

Outside air means the air outside buildings and structures, including, but not limited to, the air under a bridge or in an open air ferry dock.

Owner or operator of a demolition or renovation activity means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

Particulate asbestos material means finely divided particles of asbestos or material containing asbestos.

Planned renovation operations means a renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

Regulated asbestos-containing material (RACM) means (a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Remove means to take out RACM or facility components that contain or are covered with RACM from any facility.

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

Resilient floor covering means asbestos-containing floor tile, including asphalt and vinyl floor tile, and sheet vinyl floor covering containing more than 1 percent asbestos as determined using polarized light microscopy according to the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy.

Roadways means surfaces on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.

Strip means to take off RACM from any part of a facility or facility components.

Structural member means any load-supporting member of a facility, such as beams and load supporting walls; or any nonload-supporting member, such as ceilings and nonload-supporting walls.

Visible emissions means any emissions, which are visually detectable without the aid of instruments, coming from

RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Waste generator means any owner or operator of a source covered by this subpart whose act or process produces asbestos-containing waste material.

Waste shipment record means the shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Working day means Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

[49 FR 13661, Apr. 5, 1984; 49 FR 25453, June 21, 1984, as amended by 55 FR 48414, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991; 60 FR 31920, June 19, 1995]

§ 61.142 Standard for asbestos mills.

(a) Each owner or operator of an asbestos mill shall either discharge no visible emissions to the outside air from that asbestos mill, including fugitive sources, or use the methods specified by § 61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(b) Each owner or operator of an asbestos mill shall meet the following requirements:

(1) Monitor each potential source of asbestos emissions from any part of the mill facility, including air cleaning devices, process equipment, and buildings that house equipment for material processing and handling, at least once each day, during daylight hours, for visible emissions to the outside air during periods of operation. The monitoring shall be by visual observation of at least 15 seconds duration per source of emissions.

(2) Inspect each air cleaning device at least once each week for proper operation and for changes that signal the potential for malfunction, including, to the maximum extent possible without dismantling other than opening the device, the presence of tears, holes, and abrasions in filter bags and for dust deposits on the clean side of bags. For air cleaning devices that cannot be inspected on a weekly basis according to this paragraph, submit to the Administrator, and revise as necessary, a written maintenance plan to include, at a minimum, the following:

(i) Maintenance schedule.

(ii) Recordkeeping plan.

(3) Maintain records of the results of visible emissions monitoring and air cleaning device inspections using a format similar to that shown in Figures 1 and 2 and include the following:

(i) Date and time of each inspection.

(ii) Presence or absence of visible emissions.

(iii) Condition of fabric filters, including presence of any tears, holes, and abrasions.

(iv) Presence of dust deposits on clean side of fabric filters.

(v) Brief description of corrective actions taken, including date and time.

(vi) Daily hours of operation for each air cleaning device.

(4) Furnish upon request, and make available at the affected facility during normal business hours for inspection by the Administrator, all records required under this section.

(5) Retain a copy of all monitoring and inspection records for at least 2 years.

(6) Submit semiannually a copy of visible emission monitoring records to the Administrator if visible emissions occurred during the report period. Semiannual reports shall be postmarked by the 30th day following the end of the six-month period.

Date of Inspection (mo/day/yr)	Time of inspection (a.m./p.m.)	Air cleaning device or fugitive source designation or number	Visible emissions observed (yes/no), corrective action taken	Daily operating hours	Inspector's initials

Figure 1. Record of Visible Emission Monitoring

1. Air cleaning device designation or number	_____			
2. Date of inspection	_____	_____	_____	_____
3. Time of inspection	_____	_____	_____	_____
4. Is air cleaning device operating properly (yes/no)	_____	_____	_____	_____
5. Tears, holes, or abrasions in fabric filter (yes/no)	_____	_____	_____	_____
6. Dust on clean side of fabric filters (yes/no)	_____	_____	_____	_____
7. Other signs of malfunctions or potential malfunctions (yes/no)	_____	_____	_____	_____
8. Describe other malfunctions or signs of potential malfunctions.	_____ _____ _____			
9. Describe corrective action(s) taken.	_____ _____ _____			
10. Date and time corrective action taken	_____	_____	_____	_____
11. Inspected by				
	_____ (Print/type Name)	_____ (Title)	_____ (Signature)	_____ (Date)
	_____ (Print/type Name)	_____ (Title)	_____ (Signature)	_____ (Date)

Figure 2. Air Cleaning Device Inspection Checklist

[55 FR 48416, Nov. 20, 1990, as amended at 64 FR 7467, Feb. 12, 1999]

§ 61.143 Standard for roadways.

No person may construct or maintain a roadway with asbestos tailings or asbestos-containing waste material on that roadway, unless, for asbestos tailings.

(a) It is a temporary roadway on an area of asbestos ore deposits (asbestos mine); or

(b) It is a temporary roadway at an active asbestos mill site and is encapsulated with a resinous or bituminous

binder. The encapsulated road surface must be maintained at a minimum frequency of once per year to prevent dust emissions; or

(c) It is encapsulated in asphalt concrete meeting the specifications contained in section 401 of Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-85, 1985, or their equivalent.

[55 FR 48419, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991]

§ 61.144 Standard for manufacturing.

(a) *Applicability.* This section applies to the following manufacturing operations using commercial asbestos.

(1) The manufacture of cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving, lap, or other textile materials.

(2) The manufacture of cement products.

(3) The manufacture of fireproofing and insulating materials.

(4) The manufacture of friction products.

(5) The manufacture of paper, millboard, and felt.

(6) The manufacture of floor tile.

(7) The manufacture of paints, coatings, caulks, adhesives, and sealants.

(8) The manufacture of plastics and rubber materials.

(9) The manufacture of chlorine utilizing asbestos diaphragm technology.

(10) The manufacture of shotgun shell wads.

(11) The manufacture of asphalt concrete.

(b) *Standard.* Each owner or operator of any of the manufacturing operations to which this section applies shall either:

(1) Discharge no visible emissions to the outside air from these operations or from any building or structure in which they are conducted or from any other fugitive sources; or

(2) Use the methods specified by § 61.152 to clean emissions from these operations containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) Monitor each potential source of asbestos emissions from any part of the manufacturing facility, including air cleaning devices, process equipment, and buildings housing material proc-

essing and handling equipment, at least once each day during daylight hours for visible emissions to the outside air during periods of operation. The monitoring shall be by visual observation of at least 15 seconds duration per source of emissions.

(4) Inspect each air cleaning device at least once each week for proper operation and for changes that signal the potential for malfunctions, including, to the maximum extent possible without dismantling other than opening the device, the presence of tears, holes, and abrasions in filter bags and for dust deposits on the clean side of bags. For air cleaning devices that cannot be inspected on a weekly basis according to this paragraph, submit to the Administrator, and revise as necessary, a written maintenance plan to include, at a minimum, the following:

(i) Maintenance schedule.

(ii) Recordkeeping plan.

(5) Maintain records of the results of visible emission monitoring and air cleaning device inspections using a format similar to that shown in Figures 1 and 2 and include the following.

(i) Date and time of each inspection.

(ii) Presence or absence of visible emissions.

(iii) Condition of fabric filters, including presence of any tears, holes and abrasions.

(iv) Presence of dust deposits on clean side of fabric filters.

(v) Brief description of corrective actions taken, including date and time.

(vi) Daily hours of operation for each air cleaning device.

(6) Furnish upon request, and make available at the affected facility during normal business hours for inspection by the Administrator, all records required under this section.

(7) Retain a copy of all monitoring and inspection records for at least 2 years.

(8) Submit semiannually a copy of the visible emission monitoring records to the Administrator if visible emission occurred during the report period. Semiannual reports shall be postmarked by the 30th day following the end of the six-month period.

[49 FR 13661, Apr. 5, 1984, as amended at 55 FR 48419, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991; 64 FR 7467, Feb. 12, 1999]

§ 61.145 Standard for demolition and renovation.

(a) *Applicability.* To determine which requirements of paragraphs (a), (b), and (c) of this section apply to the owner or operator of a demolition or renovation activity and prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable ACM. The requirements of paragraphs (b) and (c) of this section apply to each owner or operator of a demolition or renovation activity, including the removal of RACM as follows:

(1) In a facility being demolished, all the requirements of paragraphs (b) and (c) of this section apply, except as provided in paragraph (a)(3) of this section, if the combined amount of RACM is

(i) At least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or

(ii) At least 1 cubic meter (35 cubic feet) off facility components where the length or area could not be measured previously.

(2) In a facility being demolished, only the notification requirements of paragraphs (b)(1), (2), (3)(i) and (iv), and (4)(i) through (vii) and (4)(ix) and (xvi) of this section apply, if the combined amount of RACM is

(i) Less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) on other facility components, and

(ii) Less than one cubic meter (35 cubic feet) off facility components where the length or area could not be measured previously or there is no asbestos.

(3) If the facility is being demolished under an order of a State or local government agency, issued because the facility is structurally unsound and in danger of imminent collapse, only the requirements of paragraphs (b)(1), (b)(2), (b)(3)(iii), (b)(4) (except (b)(4)(viii)), (b)(5), and (c)(4) through (c)(9) of this section apply.

(4) In a facility being renovated, including any individual nonscheduled

renovation operation, all the requirements of paragraphs (b) and (c) of this section apply if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is

(i) At least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or

(ii) At least 1 cubic meter (35 cubic feet) off facility components where the length or area could not be measured previously.

(iii) To determine whether paragraph (a)(4) of this section applies to planned renovation operations involving individual nonscheduled operations, predict the combined additive amount of RACM to be removed or stripped during a calendar year of January 1 through December 31.

(iv) To determine whether paragraph (a)(4) of this section applies to emergency renovation operations, estimate the combined amount of RACM to be removed or stripped as a result of the sudden, unexpected event that necessitated the renovation.

(5) Owners or operators of demolition and renovation operations are exempt from the requirements of §§ 61.05(a), 61.07, and 61.09.

(b) *Notification requirements.* Each owner or operator of a demolition or renovation activity to which this section applies shall:

(1) Provide the Administrator with written notice of intention to demolish or renovate. Delivery of the notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable.

(2) Update notice, as necessary, including when the amount of asbestos affected changes by at least 20 percent.

(3) Postmark or deliver the notice as follows:

(i) At least 10 working days before asbestos stripping or removal work or any other activity begins (such as site preparation that would break up, dislodge or similarly disturb asbestos material), if the operation is described in paragraphs (a) (1) and (4) (except (a)(4)(iii) and (a)(4)(iv)) of this section. If the operation is as described in paragraph (a)(2) of this section, notification

is required 10 working days before demolition begins.

(ii) At least 10 working days before the end of the calendar year preceding the year for which notice is being given for renovations described in paragraph (a)(4)(iii) of this section.

(iii) As early as possible before, but not later than, the following working day if the operation is a demolition ordered according to paragraph (a)(3) of this section or, if the operation is a renovation described in paragraph (a)(4)(iv) of this section.

(iv) For asbestos stripping or removal work in a demolition or renovation operation, described in paragraphs (a) (1) and (4) (except (a)(4)(iii) and (a)(4)(iv)) of this section, and for a demolition described in paragraph (a)(2) of this section, that will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator as follows:

(A) When the asbestos stripping or removal operation or demolition operation covered by this paragraph will begin after the date contained in the notice,

(1) Notify the Administrator of the new start date by telephone as soon as possible before the original start date, and

(2) Provide the Administrator with a written notice of the new start date as soon as possible before, and no later than, the original start date. Delivery of the updated notice by the U.S. Postal Service, commercial delivery service, or hand delivery is acceptable.

(B) When the asbestos stripping or removal operation or demolition operation covered by this paragraph will begin on a date earlier than the original start date,

(1) Provide the Administrator with a written notice of the new start date at least 10 working days before asbestos stripping or removal work begins.

(2) For demolitions covered by paragraph (a)(2) of this section, provide the Administrator written notice of a new start date at least 10 working days before commencement of demolition. Delivery of updated notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable.

(C) In no event shall an operation covered by this paragraph begin on a date other than the date contained in the written notice of the new start date.

(4) Include the following in the notice:

(i) An indication of whether the notice is the original or a revised notification.

(ii) Name, address, and telephone number of both the facility owner and operator and the asbestos removal contractor owner or operator.

(iii) Type of operation: demolition or renovation.

(iv) Description of the facility or affected part of the facility including the size (square meters [square feet] and number of floors), age, and present and prior use of the facility.

(v) Procedure, including analytical methods, employed to detect the presence of RACM and Category I and Category II nonfriable ACM.

(vi) Estimate of the approximate amount of RACM to be removed from the facility in terms of length of pipe in linear meters (linear feet), surface area in square meters (square feet) on other facility components, or volume in cubic meters (cubic feet) if off the facility components. Also, estimate the approximate amount of Category I and Category II nonfriable ACM in the affected part of the facility that will not be removed before demolition.

(vii) Location and street address (including building number or name and floor or room number, if appropriate), city, county, and state, of the facility being demolished or renovated.

(viii) Scheduled starting and completion dates of asbestos removal work (or any other activity, such as site preparation that would break up, dislodge, or similarly disturb asbestos material) in a demolition or renovation; planned renovation operations involving individual nonscheduled operations shall only include the beginning and ending dates of the report period as described in paragraph (a)(4)(iii) of this section.

(ix) Scheduled starting and completion dates of demolition or renovation.

(x) Description of planned demolition or renovation work to be performed

and method(s) to be employed, including demolition or renovation techniques to be used and description of affected facility components.

(xi) Description of work practices and engineering controls to be used to comply with the requirements of this subpart, including asbestos removal and waste-handling emission control procedures.

(xii) Name and location of the waste disposal site where the asbestos-containing waste material will be deposited.

(xiii) A certification that at least one person trained as required by paragraph (c)(8) of this section will supervise the stripping and removal described by this notification. This requirement shall become effective 1 year after promulgation of this regulation.

(xiv) For facilities described in paragraph (a)(3) of this section, the name, title, and authority of the State or local government representative who has ordered the demolition, the date that the order was issued, and the date on which the demolition was ordered to begin. A copy of the order shall be attached to the notification.

(xv) For emergency renovations described in paragraph (a)(4)(iv) of this section, the date and hour that the emergency occurred, a description of the sudden, unexpected event, and an explanation of how the event caused an unsafe condition, or would cause equipment damage or an unreasonable financial burden.

(xvi) Description of procedures to be followed in the event that unexpected RACM is found or Category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder.

(xvii) Name, address, and telephone number of the waste transporter.

(5) The information required in paragraph (b)(4) of this section must be reported using a form similar to that shown in Figure 3.

(c) *Procedures for asbestos emission control.* Each owner or operator of a demolition or renovation activity to whom this paragraph applies, according to paragraph (a) of this section, shall comply with the following procedures:

(1) Remove all RACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. RACM need not be removed before demolition if:

(i) It is Category I nonfriable ACM that is not in poor condition and is not friable.

(ii) It is on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition; or

(iii) It was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and adequately wet at all times until disposed of.

(iv) They are Category II nonfriable ACM and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition.

(2) When a facility component that contains, is covered with, or is coated with RACM is being taken out of the facility as a unit or in sections:

(i) Adequately wet all RACM exposed during cutting or disjoining operations; and

(ii) Carefully lower each unit or section to the floor and to ground level, not dropping, throwing, sliding, or otherwise damaging or disturbing the RACM.

(3) When RACM is stripped from a facility component while it remains in place in the facility, adequately wet the RACM during the stripping operation.

(i) In renovation operations, wetting is not required if:

(A) The owner or operator has obtained prior written approval from the Administrator based on a written application that wetting to comply with this paragraph would unavoidably damage equipment or present a safety hazard; and

(B) The owner or operator uses of the following emission control methods:

(1) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the asbestos materials. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in §61.152.

(2) A glove-bag system designed and operated to contain the particulate asbestos material produced by the stripping of the asbestos materials.

(3) Leak-tight wrapping to contain all RACM prior to dismantlement.

(ii) In renovation operations where wetting would result in equipment damage or a safety hazard, and the methods allowed in paragraph (c)(3)(i) of this section cannot be used, another method may be used after obtaining written approval from the Administrator based upon a determination that it is equivalent to wetting in controlling emissions or to the methods allowed in paragraph (c)(3)(i) of this section.

(iii) A copy of the Administrator's written approval shall be kept at the worksite and made available for inspection.

(4) After a facility component covered with, coated with, or containing RACM has been taken out of the facility as a unit or in sections pursuant to paragraph (c)(2) of this section, it shall be stripped or contained in leak-tight wrapping, except as described in paragraph (c)(5) of this section. If stripped, either:

(i) Adequately wet the RACM during stripping; or

(ii) Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in §61.152.

(5) For large facility components such as reactor vessels, large tanks, and steam generators, but not beams (which must be handled in accordance with paragraphs (c)(2), (3), and (4) of this section), the RACM is not required to be stripped if the following requirements are met:

(i) The component is removed, transported, stored, disposed of, or reused without disturbing or damaging the RACM.

(ii) The component is encased in a leak-tight wrapping.

(iii) The leak-tight wrapping is labeled according to §61.149(d)(1)(i), (ii), and (iii) during all loading and unloading operations and during storage.

(6) For all RACM, including material that has been removed or stripped:

(i) Adequately wet the material and ensure that it remains wet until collected and contained or treated in preparation for disposal in accordance with §61.150; and

(ii) Carefully lower the material to the ground and floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material.

(iii) Transport the material to the ground via leak-tight chutes or containers if it has been removed or stripped more than 50 feet above ground level and was not removed as units or in sections.

(iv) RACM contained in leak-tight wrapping that has been removed in accordance with paragraphs (c)(4) and (c)(3)(i)(B)(3) of this section need not be wetted.

(7) When the temperature at the point of wetting is below 0 °C (32 °F):

(i) The owner or operator need not comply with paragraph (c)(2)(i) and the wetting provisions of paragraph (c)(3) of this section.

(ii) The owner or operator shall remove facility components containing, coated with, or covered with RACM as units or in sections to the maximum extent possible.

(iii) During periods when wetting operations are suspended due to freezing temperatures, the owner or operator must record the temperature in the area containing the facility components at the beginning, middle, and end of each workday and keep daily temperature records available for inspection by the Administrator during normal business hours at the demolition or renovation site. The owner or operator shall retain the temperature records for at least 2 years.

(8) Effective 1 year after promulgation of this regulation, no RACM shall

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be stripped, removed, or otherwise handled or disturbed at a facility regulated by this section unless at least one on-site representative, such as a foreman or management-level person or other authorized representative, trained in the provisions of this regulation and the means of complying with them, is present. Every 2 years, the trained on-site individual shall receive refresher training in the provisions of this regulation. The required training shall include as a minimum: applicability; notifications; material identification; control procedures for removals including, at least, wetting, local exhaust ventilation, negative pressure enclosures, glove-bag procedures, and High Efficiency Particulate Air (HEPA) fil-

ters; waste disposal work practices; reporting and recordkeeping; and asbestos hazards and worker protection. Evidence that the required training has been completed shall be posted and made available for inspection by the Administrator at the demolition or renovation site.

(9) For facilities described in paragraph (a)(3) of this section, adequately wet the portion of the facility that contains RACM during the wrecking operation.

(10) If a facility is demolished by intentional burning, all RACM including Category I and Category II nonfriable ACM must be removed in accordance with the NESHAP before burning.

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NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project #	Postmark	Date Received	Notification #
I. TYPE OF NOTIFICATION (O=Original R=Revised C=Cancelled):			
II. FACILITY INFORMATION (Identify owner, removal contractor, and other operator)			
OWNER NAME:			
Address:			
City:	State:	Zip:	
Contact:	Tel:		
REMOVAL CONTRACTOR:			
Address:			
City:	State:	Zip:	
Contact:	Tel:		
OTHER OPERATOR:			
Address:			
City:	State:	Zip:	
Contact:	Tel:		
III. TYPE OF OPERATION (D=Demo O=Ordered Demo R=Renovation E=Emer.Renovation):			
IV. IS ASBESTOS PRESENT? (Yes/No)			
V. FACILITY DESCRIPTION (Include building name, number and floor or room number)			
Bldg Name:			
Address:			
City:	State:	County:	
Site Location:			
Building Size:	# of Floors:	Age in Years:	
Present User:	Prior User:		
VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:			
VII. APPROXIMATE AMOUNT OF ASBESTOS, INCLUDING:		Nonfriable Asbestos Material Not To Be Removed	
1. Regulated ACM to be removed		Cat I	
2. Category I ACM Not Removed		Cat II	
3. Category II ACM Not Removed		UNIT	
Pipes			Ln ft:
Surface Area			Sq ft:
Vol ACM Off Facility Component			Cu ft:
VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) Start: Complete:			
IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) Start: Complete:			

Continued on page two

Figure 3. Notification of Demolition and Renovation

NOTIFICATION OF DEMOLITION AND RENOVATION (continued)			
X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:			
XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE:			
XII. WASTE TRANSPORTER #1			
Name:			
Address:			
City:	State:	Zip:	
Contact Person:	Telephone:		
WASTE TRANSPORTER #2			
Name:			
Address:			
City:	State:	Zip:	
Contact Person:	Telephone:		
XIII. WASTE DISPOSAL SITE			
Name:			
Location:			
City:	State:	Zip:	
Telephone:			
XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW:			
Name:		Title:	
Authority:			
Date of Order (MM/DD/YY):		Date Ordered to Begin (MM/DD/YY):	
XV. FOR EMERGENCY RENOVATIONS			
Date and Hour of Emergency (MM/DD/YY):			
Description of the Sudden, Unexpected Event:			
Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden:			
XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER.			
XVI. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART H) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS. (Required 1 year after promulgation)			
(Signature of owner/operator)			(Date)
XVII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.			
(Signature of owner/operator)			(Date)

Figure 3. Notification of Demolition and Renovation

[56 FR 48419, Nov. 20, 1990; 56 FR 1869, Jan. 16, 1991]

§ 61.146 Standard for spraying.

The owner or operator of an operation in which asbestos-containing materials are spray applied shall comply with the following requirements:

(a) For spray-on application on buildings, structures, pipes, and conduits, do not use material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1,

Polarized Light Microscopy, except as provided in paragraph (c) of this section.

(b) For spray-on application of materials that contain more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, on equipment and machinery, except as provided in paragraph (c) of this section:

(1) Notify the Administrator at least 20 days before beginning the spraying operation. Include the following information in the notice:

(i) Name and address of owner or operator.

(ii) Location of spraying operation.

(iii) Procedures to be followed to meet the requirements of this paragraph.

(2) Discharge no visible emissions to the outside air from spray-on application of the asbestos-containing material or use the methods specified by §61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(c) The requirements of paragraphs (a) and (b) of this section do not apply to the spray-on application of materials where the asbestos fibers in the materials are encapsulated with a bituminous or resinous binder during spraying and the materials are not friable after drying.

(d) Owners or operators of sources subject to this paragraph are exempt from the requirements of §§61.05(a), 61.07 and 61.09.

[49 FR 13661, Apr. 5, 1984. Redesignated and amended at 55 FR 48424, Nov. 20, 1990; 60 FR 31920, June 19, 1995]

§61.147 Standard for fabricating.

(a) *Applicability.* This section applies to the following fabricating operations using commercial asbestos:

(1) The fabrication of cement building products.

(2) The fabrication of friction products, except those operations that primarily install asbestos friction materials on motor vehicles.

(3) The fabrication of cement or silicate board for ventilation hoods; ovens; electrical panels; laboratory furniture, bulkheads, partitions, and ceilings for

marine construction; and flow control devices for the molten metal industry.

(b) *Standard.* Each owner or operator of any of the fabricating operations to which this section applies shall either:

(1) Discharge no visible emissions to the outside air from any of the operations or from any building or structure in which they are conducted or from any other fugitive sources; or

(2) Use the methods specified by §61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) Monitor each potential source of asbestos emissions from any part of the fabricating facility, including air cleaning devices, process equipment, and buildings that house equipment for material processing and handling, at least once each day, during daylight hours, for visible emissions to the outside air during periods of operation. The monitoring shall be by visual observation of at least 15 seconds duration per source of emissions.

(4) Inspect each air cleaning device at least once each week for proper operation and for changes that signal the potential for malfunctions, including, to the maximum extent possible without dismantling other than opening the device, the presence of tears, holes, and abrasions in filter bags and for dust deposits on the clean side of bags. For air cleaning devices that cannot be inspected on a weekly basis according to this paragraph, submit to the Administrator, and revise as necessary, a written maintenance plan to include, at a minimum, the following:

(i) Maintenance schedule.

(ii) Recordkeeping plan.

(5) Maintain records of the results of visible emission monitoring and air cleaning device inspections using a format similar to that shown in Figures 1 and 2 and include the following:

(i) Date and time of each inspection.

(ii) Presence or absence of visible emissions.

(iii) Condition of fabric filters, including presence of any tears, holes, and abrasions.

(iv) Presence of dust deposits on clean side of fabric filters.

(v) Brief description of corrective actions taken, including date and time.

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(vi) Daily hours of operation for each air cleaning device.

(6) Furnish upon request and make available at the affected facility during normal business hours for inspection by the Administrator, all records required under this section.

(7) Retain a copy of all monitoring and inspection records for at least 2 years.

(8) Submit semiannually a copy of the visible emission monitoring records to the Administrator if visible emission occurred during the report period. Semiannual reports shall be postmarked by the 30th day following the end of the six-month period.

[49 FR 13661, Apr. 5, 1984. Redesignated and amended at 55 FR 48424, Nov. 20, 1991; 64 FR 7467, Feb. 12, 1999]

§61.148 Standard for insulating materials.

No owner or operator of a facility may install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this section do not apply to spray-applied insulating materials regulated under §61.146.

[55 FR 48424, Nov. 20, 1990]

§61.149 Standard for waste disposal for asbestos mills.

Each owner or operator of any source covered under the provisions of §61.142 shall:

(a) Deposit all asbestos-containing waste material at a waste disposal site operated in accordance with the provisions of §61.154; and

(b) Discharge no visible emissions to the outside air from the transfer of control device asbestos waste to the tailings conveyor, or use the methods specified by §61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air. Dispose of the asbestos waste from control devices in accordance with §61.150(a) or paragraph (c) of this section; and

(c) Discharge no visible emissions to the outside air during the collection, processing, packaging, or on-site transporting of any asbestos-containing

waste material, or use one of the disposal methods specified in paragraphs (c) (1) or (2) of this section, as follows:

(1) Use a wetting agent as follows:

(i) Adequately mix all asbestos-containing waste material with a wetting agent recommended by the manufacturer of the agent to effectively wet dust and tailings, before depositing the material at a waste disposal site. Use the agent as recommended for the particulate dust by the manufacturer of the agent.

(ii) Discharge no visible emissions to the outside air from the wetting operation or use the methods specified by §61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(iii) Wetting may be suspended when the ambient temperature at the waste disposal site is less than -9.5°C (15°F), as determined by an appropriate measurement method with an accuracy of $\pm 1^{\circ}\text{C}$ ($\pm 2^{\circ}\text{F}$). During periods when wetting operations are suspended, the temperature must be recorded at least at hourly intervals, and records must be retained for at least 2 years in a form suitable for inspection.

(2) Use an alternative emission control and waste treatment method that has received prior written approval by the Administrator. To obtain approval for an alternative method, a written application must be submitted to the Administrator demonstrating that the following criteria are met:

(i) The alternative method will control asbestos emissions equivalent to currently required methods.

(ii) The suitability of the alternative method for the intended application.

(iii) The alternative method will not violate other regulations.

(iv) The alternative method will not result in increased water pollution, land pollution, or occupational hazards.

(d) When waste is transported by vehicle to a disposal site:

(1) Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of the waste so that the signs are visible. The markings must:

(i) Be displayed in such a manner and location that a person can easily read the legend.

(ii) Conform to the requirements for 51 cm × 36 cm (20 in × 14 in) upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend
DANGER
ASBESTOS DUST HAZARD
CANCER AND LUNG DISEASE HAZARD
Authorized Personnel Only
Notation
2.5 cm (1 inch) Sans Serif, Gothic or Block
2.5 cm (1 inch) Sans Serif, Gothic or Block
1.9 cm (¾ inch) Sans Serif, Gothic or Block
14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) For off-site disposal, provide a copy of the waste shipment record, described in paragraph (e)(1) of this section, to the disposal site owner or operator at the same time as the asbestos-containing waste material is delivered to the disposal site.

(e) For all asbestos-containing waste material transported off the facility site:

(1) Maintain asbestos waste shipment records, using a form similar to that shown in Figure 4, and include the following information:

(i) The name, address, and telephone number of the waste generator.

(ii) The name and address of the local, State, or EPA Regional agency responsible for administering the asbestos NESHAP program.

(iii) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).

(iv) The name and telephone number of the disposal site operator.

(v) The name and physical site location of the disposal site.

(vi) The date transported.

(vii) The name, address, and telephone number of the transporter(s).

(viii) A certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

(2) For waste shipments where a copy of the waste shipment record, signed by the owner or operator of the designated disposal site, is not received by the waste generator within 35 days of the date the waste was accepted by the initial transporter, contact the transporter and/or the owner or operator of the designated disposal site to determine the status of the waste shipment.

(3) Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator if a copy of the waste shipment record, signed by the owner or operator of the designated waste disposal site, is not received by the waste generator within 45 days of the date the waste was accepted by the initial transporter. Include in the report the following information:

(i) A copy of the waste shipment record for which a confirmation of delivery was not received, and

(ii) A cover letter signed by the waste generator explaining the efforts taken to locate the asbestos waste shipment and the results of those efforts.

(4) Retain a copy of all waste shipment records, including a copy of the waste shipment record signed by the owner or operator of the designated waste disposal site, for at least 2 years.

(f) Furnish upon request, and make available for inspection by the Administrator, all records required under this section.

Generator	1. Work site name and mailing address		Owner's name	Owner's telephone no.
	2. Operator's name and address			Operator's telephone no.
	3. Waste disposal site (WDS) name, mailing address, and physical site location			WDS phone no.
	4. Name, and address of responsible agency			
	5. Description of materials		6. Containers No. Type	7. Total quantity m ³ (yd ³)
	8. Special handling instructions and additional information			
	9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.			
	Printed/typed name & title		Signature	Month Day Year
Transporter	10. Transporter 1 (Acknowledgment of receipt of materials)			
	Printed/typed name & title		Signature	Month Day Year
	Address and telephone no.			
	11. Transporter 2 (Acknowledgment of receipt of materials)			
Disposal Site	Printed/typed name & title		Signature	Month Day Year
	Address and telephone no.			
	12. Discrepancy indication space			
13. Waste disposal site owner or operator: Certification of receipt of asbestos materials covered by this manifest except as noted in item 12.				
Printed/typed name & title		Signature	Month Day Year	

(Continued)

Figure 4. Waste Shipment Record

INSTRUCTIONS	
<u>Waste Generator Section</u> (Items 1-9)	
1.	Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number.
2.	If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3.	Enter the name, address, and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on-site" if the waste will be disposed of on the generator's property.
4.	Provide the name and address of the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program.
5.	Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is <ul style="list-style-type: none"> - Friable asbestos material - Nonfriable asbestos material
6.	Enter the number of containers used to transport the asbestos materials listed in item 5. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below): <ul style="list-style-type: none"> DM - Metal drums, barrels DP - Plastic drums, barrels BA - 6 mil plastic bags or wrapping
7.	Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8.	Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.
9.	The authorized agent of the waste generator must read and then sign and date this certification. The date is the date of receipt by transporter.
NOTE: The waste generator must retain a copy of this form.	

(continued)

Figure 4. Waste Shipment Record

<p><u>Transporter Section (Items 10 & 11)</u></p> <p>10. & 11. Enter name, address, and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport. Enter date of receipt and signature.</p> <p>NOTE: The transporter must retain a copy of this form.</p> <p><u>Disposal Site Section (Items 12 & 13)</u></p> <p>12. The authorized representative of the WDS must note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided. A site that converts asbestos-containing waste material to nonasbestos material is considered a WDS.</p> <p>13. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in item 12. The date is the date of signature and receipt of shipment.</p> <p>NOTE: The WDS must retain a completed copy of this form. The WDS must also send a completed copy to the operator listed in item 2.</p>

Figure 4. Waste Shipment Record

§61.150 Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations.

Each owner or operator of any source covered under the provisions of §§61.144, 61.145, 61.146, and 61.147 shall comply with the following provisions:

(a) Discharge no visible emissions to the outside air during the collection, processing (including incineration), packaging, or transporting of any asbestos-containing waste material generated by the source, or use one of the emission control and waste treatment methods specified in paragraphs (a) (1) through (4) of this section.

(1) Adequately wet asbestos-containing waste material as follows:

(i) Mix control device asbestos waste to form a slurry; adequately wet other asbestos-containing waste material; and

(ii) Discharge no visible emissions to the outside air from collection, mixing, wetting, and handling operations, or use the methods specified by §61.152 to clean emissions containing particulate

asbestos material before they escape to, or are vented to, the outside air; and

(iii) After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; or, for materials that will not fit into containers without additional breaking, put materials into leak-tight wrapping; and

(iv) Label the containers or wrapped materials specified in paragraph (a)(1)(iii) of this section using warning labels specified by Occupational Safety and Health Standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.1001(j)(4) or 1926.1101(k)(8). The labels shall be printed in letters of sufficient size and contrast so as to be readily visible and legible.

(v) For asbestos-containing waste material to be transported off the facility site, label containers or wrapped materials with the name of the waste generator and the location at which the waste was generated.

(2) Process asbestos-containing waste material into nonfriable forms as follows:

(i) Form all asbestos-containing waste material into nonfriable pellets or other shapes;

(ii) Discharge no visible emissions to the outside air from collection and processing operations, including incineration, or use the method specified by §61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) For facilities demolished where the RACM is not removed prior to demolition according to §§61.145(c)(1) (i), (ii), (iii), and (iv) or for facilities demolished according to §61.145(c)(9), adequately wet asbestos-containing waste material at all times after demolition and keep wet during handling and loading for transport to a disposal site. Asbestos-containing waste materials covered by this paragraph do not have to be sealed in leak-tight containers or wrapping but may be transported and disposed of in bulk.

(4) Use an alternative emission control and waste treatment method that has received prior approval by the Administrator according to the procedure described in §61.149(c)(2).

(5) As applied to demolition and renovation, the requirements of paragraph (a) of this section do not apply to Category I nonfriable ACM waste and Category II nonfriable ACM waste that did not become crumbled, pulverized, or reduced to powder.

(b) All asbestos-containing waste material shall be deposited as soon as is practical by the waste generator at:

(1) A waste disposal site operated in accordance with the provisions of §61.154, or

(2) An EPA-approved site that converts RACM and asbestos-containing waste material into nonasbestos (asbestos-free) material according to the provisions of §61.155.

(3) The requirements of paragraph (b) of this section do not apply to Category I nonfriable ACM that is not RACM.

(c) Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of waste so that the signs are visible. The

markings must conform to the requirements of §§61.149(d)(1) (i), (ii), and (iii).

(d) For all asbestos-containing waste material transported off the facility site:

(1) Maintain waste shipment records, using a form similar to that shown in Figure 4, and include the following information:

(i) The name, address, and telephone number of the waste generator.

(ii) The name and address of the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program.

(iii) The approximate quantity in cubic meters (cubic yards).

(iv) The name and telephone number of the disposal site operator.

(v) The name and physical site location of the disposal site.

(vi) The date transported.

(vii) The name, address, and telephone number of the transporter(s).

(viii) A certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

(2) Provide a copy of the waste shipment record, described in paragraph (d)(1) of this section, to the disposal site owners or operators at the same time as the asbestos-containing waste material is delivered to the disposal site.

(3) For waste shipments where a copy of the waste shipment record, signed by the owner or operator of the designated disposal site, is not received by the waste generator within 35 days of the date the waste was accepted by the initial transporter, contact the transporter and/or the owner or operator of the designated disposal site to determine the status of the waste shipment.

(4) Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator if a copy of the waste shipment record, signed by the owner or operator of the designated waste disposal site, is not received by the waste generator within 45 days of the date the waste

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was accepted by the initial transporter. Include in the report the following information:

(i) A copy of the waste shipment record for which a confirmation of delivery was not received, and

(ii) A cover letter signed by the waste generator explaining the efforts taken to locate the asbestos waste shipment and the results of those efforts.

(5) Retain a copy of all waste shipment records, including a copy of the waste shipment record signed by the owner or operator of the designated waste disposal site, for at least 2 years.

(e) Furnish upon request, and make available for inspection by the Administrator, all records required under this section.

[55 FR 48429, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991, as amended at 68 FR 54793, Sept. 18, 2003]

§61.151 Standard for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations.

Each owner or operator of any inactive waste disposal site that was operated by sources covered under §61.142, 61.144, or 61.147 and received deposits of asbestos-containing waste material generated by the sources, shall:

(a) Comply with one of the following:

(1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph; or

(2) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted non-asbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material. In desert areas where vegetation would be difficult to maintain, at least 8 additional centimeters (3 inches) of well-graded, nonasbestos crushed rock may be placed on top of the final cover instead of vegetation and maintained to prevent emissions; or

(3) Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted non-asbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste; or

(4) For inactive waste disposal sites for asbestos tailings, a resinous or petroleum-based dust suppression agent that effectively binds dust to control surface air emissions may be used instead of the methods in paragraphs (a) (1), (2), and (3) of this section. Use the agent in the manner and frequency recommended for the particular asbestos tailings by the manufacturer of the dust suppression agent to achieve and maintain dust control. Obtain prior written approval of the Administrator to use other equally effective dust suppression agents. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

(b) Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with paragraph (a)(2) or (a)(3) of this section.

(1) Display warning signs at all entrances and at intervals of 100 m (328 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited. The warning signs must:

(i) Be posted in such a manner and location that a person can easily read the legend; and

(ii) Conform to the requirements for 51 cm×36 cm (20"×14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site.	2.5 cm (1 inch) Sans Serif, Gothic or Block
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif, Gothic or Block
Breathing Asbestos is Hazardous to Your Health.	14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) Fence the perimeter of the site in a manner adequate to deter access by the general public.

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(3) When requesting a determination on whether a natural barrier adequately deters public access, supply information enabling the Administrator to determine whether a fence or a natural barrier adequately deters access by the general public.

(c) The owner or operator may use an alternative control method that has received prior approval of the Administrator rather than comply with the requirements of paragraph (a) or (b) of this section.

(d) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site under this section, and follow the procedures specified in the notification. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

(1) Scheduled starting and completion dates.

(2) Reason for disturbing the waste.

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.

(4) Location of any temporary storage site and the final disposal site.

(e) Within 60 days of a site becoming inactive and after the effective date of this subpart, record, in accordance with State law, a notation on the deed to the facility property and on any other instrument that would normally be examined during a title search; this notation will in perpetuity notify any potential purchaser of the property that:

(1) The land has been used for the disposal of asbestos-containing waste material;

(2) The survey plot and record of the location and quantity of asbestos-containing waste disposed of within the

disposal site required in § 61.154(f) have been filed with the Administrator; and

(3) The site is subject to 40 CFR part 61, subpart M.

[49 FR 13661, Apr. 5, 1984, as amended at 53 FR 36972, Sept. 23, 1988. Redesignated and amended at 55 FR 48429, Nov. 20, 1990]

§ 61.152 Air-cleaning.

(a) The owner or operator who uses air cleaning, as specified in §§ 61.142(a), 61.144(b)(2), 61.145(c)(3)(i)(B)(I), 61.145(c)(4)(ii), 61.145(c)(11)(i), 61.146(b)(2), 61.147(b)(2), 61.149(b), 61.149(c)(1)(ii), 61.150(a)(1)(ii), 61.150(a)(2)(ii), and 61.155(e) shall:

(1) Use fabric filter collection devices, except as noted in paragraph (b) of this section, doing all of the following:

(i) Ensuring that the airflow permeability, as determined by ASTM Method D737-75, does not exceed 9 m³/min/m² (30 ft³/min/ft²) for woven fabrics or 11³/min/m² (35 ft³/min/ft²) for felted fabrics, except that 12 m³/min/m² (40 ft³/min/ft²) for woven and 14 m³/min/m² (45 ft³/min/ft²) for felted fabrics is allowed for filtering air from asbestos ore dryers; and

(ii) Ensuring that felted fabric weighs at least 475 grams per square meter (14 ounces per square yard) and is at least 1.6 millimeters (one-sixteenth inch) thick throughout; and

(iii) Avoiding the use of synthetic fabrics that contain fill yarn other than that which is spun.

(2) Properly install, use, operate, and maintain all air-cleaning equipment authorized by this section. Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos material.

(3) For fabric filter collection devices installed after January 10, 1989, provide for easy inspection for faulty bags.

(b) There are the following exceptions to paragraph (a)(1):

(1) After January 10, 1989, if the use of fabric creates a fire or explosion hazard, or the Administrator determines that a fabric filter is not feasible, the Administrator may authorize as a substitute the use of wet collectors designed to operate with a unit contacting energy of at least 9.95

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kilopascals (40 inches water gage pressure).

(2) Use a HEPA filter that is certified to be at least 99.97 percent efficient for 0.3 micron particles.

(3) The Administrator may authorize the use of filtering equipment other than described in paragraphs (a)(1) and (b)(1) and (2) of this section if the owner or operator demonstrates to the Administrator's satisfaction that it is equivalent to the described equipment in filtering particulate asbestos material.

[49 FR 13661, Apr. 5, 1984; 49 FR 25463, June 21, 1984, as amended at 51 FR 8199, Mar. 10, 1986. Redesignated and amended at 55 FR 48430, Nov. 20, 1990]

§ 61.153 Reporting.

(a) Any new source to which this subpart applies (with the exception of sources subject to §§ 61.143, 61.145, 61.146, and 61.148), which has an initial startup date preceding the effective date of this revision, shall provide the following information to the Administrator postmarked or delivered within 90 days of the effective date. In the case of a new source that does not have an initial startup date preceding the effective date, the information shall be provided, postmarked or delivered, within 90 days of the initial startup date. Any owner or operator of an existing source shall provide the following information to the Administrator within 90 days of the effective date of this subpart unless the owner or operator of the existing source has previously provided this information to the Administrator. Any changes in the information provided by any existing source shall be provided to the Administrator, postmarked or delivered, within 30 days after the change.

(1) A description of the emission control equipment used for each process; and

(i) If the fabric device uses a woven fabric, the airflow permeability in $\text{m}^3/\text{min}/\text{m}^2$ and; if the fabric is synthetic, whether the fill yarn is spun or not spun; and

(ii) If the fabric filter device uses a felted fabric, the density in g/m^2 , the minimum thickness in inches, and the airflow permeability in $\text{m}^3/\text{min}/\text{m}^2$.

(2) If a fabric filter device is used to control emissions,

(i) The airflow permeability in $\text{m}^3/\text{min}/\text{m}^2$ ($\text{ft}^3/\text{min}/\text{ft}^2$) if the fabric filter device uses a woven fabric, and, if the fabric is synthetic, whether the fill yarn is spun or not spun; and

(ii) If the fabric filter device uses a felted fabric, the density in g/m^2 (oz/yd^2), the minimum thickness in millimeters (inches), and the airflow permeability in $\text{m}^3/\text{min}/\text{m}^2$ ($\text{ft}^3/\text{min}/\text{ft}^2$).

(3) If a HEPA filter is used to control emissions, the certified efficiency.

(4) For sources subject to §§ 61.149 and 61.150:

(i) A brief description of each process that generates asbestos-containing waste material; and

(ii) The average volume of asbestos-containing waste material disposed of, measured in m^3/day (yd^3/day); and

(iii) The emission control methods used in all stages of waste disposal; and

(iv) The type of disposal site or incineration site used for ultimate disposal, the name of the site operator, and the name and location of the disposal site.

(5) For sources subject to §§ 61.151 and 61.154:

(i) A brief description of the site; and

(ii) The method or methods used to comply with the standard, or alternative procedures to be used.

(b) The information required by paragraph (a) of this section must accompany the information required by § 61.10. Active waste disposal sites subject to § 61.154 shall also comply with this provision. Roadways, demolition and renovation, spraying, and insulating materials are exempted from the requirements of § 61.10(a). The information described in this section must be reported using the format of appendix A of this part as a guide.

(Sec. 114, Clean Air Act as amended (42 U.S.C. 7414))

[49 FR 13661, Apr. 5, 1984. Redesignated and amended at 55 FR 48430, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991]

§ 61.154 Standard for active waste disposal sites.

Each owner or operator of an active waste disposal site that receives asbestos-containing waste material from a source covered under § 61.149, 61.150, or

61.155 shall meet the requirements of this section:

(a) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraph (c) or (d) of this section must be met.

(b) Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph (c)(1) of this section must be met.

(1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:

(i) Be posted in such a manner and location that a person can easily read the legend; and

(ii) Conform to the requirements of 51 cm × 36 cm (20"×14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site.	2.5 cm (1 inch) Sans Serif, Gothic or Block.
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif, Gothic or Block.
Breathing Asbestos is Hazardous to Your Health.	14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.

(c) Rather than meet the no visible emission requirement of paragraph (a) of this section, at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-con-

taining waste material that has been deposited at the site during the operating day or previous 24-hour period shall:

(1) Be covered with at least 15 centimeters (6 inches) of compacted non-asbestos-containing material, or

(2) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

(d) Rather than meet the no visible emission requirement of paragraph (a) of this section, use an alternative emissions control method that has received prior written approval by the Administrator according to the procedures described in §61.149(c)(2).

(e) For all asbestos-containing waste material received, the owner or operator of the active waste disposal site shall:

(1) Maintain waste shipment records, using a form similar to that shown in Figure 4, and include the following information:

(i) The name, address, and telephone number of the waste generator.

(ii) The name, address, and telephone number of the transporter(s).

(iii) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).

(iv) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the

waste shipment record along with the report.

(v) The date of the receipt.

(2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.

(3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

(4) Retain a copy of all records and reports required by this paragraph for at least 2 years.

(f) Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.

(g) Upon closure, comply with all the provisions of § 61.151.

(h) Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.

(i) Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.

(j) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original

notification. Include the following information in the notice:

(1) Scheduled starting and completion dates.

(2) Reason for disturbing the waste.

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.

(4) Location of any temporary storage site and the final disposal site.

(Secs. 112 and 301(a) of the Clean Air Act as amended (42 U.S.C. 7412, 7601(a))

[49 FR 13661, Apr. 5, 1990. Redesignated and amended at 55 FR 48431, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991]

§ 61.155 Standard for operations that convert asbestos-containing waste material into nonasbestos (asbestos-free) material.

Each owner or operator of an operation that converts RACM and asbestos-containing waste material into nonasbestos (asbestos-free) material shall:

(a) Obtain the prior written approval of the Administrator to construct the facility. To obtain approval, the owner or operator shall provide the Administrator with the following information:

(1) Application to construct pursuant to § 61.07.

(2) In addition to the information requirements of § 61.07(b)(3), a

(i) Description of waste feed handling and temporary storage.

(ii) Description of process operating conditions.

(iii) Description of the handling and temporary storage of the end product.

(iv) Description of the protocol to be followed when analyzing output materials by transmission electron microscopy.

(3) Performance test protocol, including provisions for obtaining information required under paragraph (b) of this section.

(4) The Administrator may require that a demonstration of the process be performed prior to approval of the application to construct.

(b) Conduct a start-up performance test. Test results shall include:

(1) A detailed description of the types and quantities of nonasbestos material, RACM, and asbestos-containing waste material processed, *e.g.*, asbestos cement products, friable asbestos insulation, plaster, wood, plastic, wire, etc. Test feed is to include the full range of materials that will be encountered in actual operation of the process.

(2) Results of analyses, using polarized light microscopy, that document the asbestos content of the wastes processed.

(3) Results of analyses, using transmission electron microscopy, that document that the output materials are free of asbestos. Samples for analysis are to be collected as 8-hour composite samples (one 200-gram (7-ounce) sample per hour), beginning with the initial introduction of RACM or asbestos-containing waste material and continuing until the end of the performance test.

(4) A description of operating parameters, such as temperature and residence time, defining the full range over which the process is expected to operate to produce nonasbestos (asbestos-free) materials. Specify the limits for each operating parameter within which the process will produce nonasbestos (asbestos-free) materials.

(5) The length of the test.

(c) During the initial 90 days of operation,

(1) Continuously monitor and log the operating parameters identified during start-up performance tests that are intended to ensure the production of nonasbestos (asbestos-free) output material.

(2) Monitor input materials to ensure that they are consistent with the test feed materials described during start-up performance tests in paragraph (b)(1) of this section.

(3) Collect and analyze samples, taken as 10-day composite samples (one 200-gram (7-ounce) sample collected every 8 hours of operation) of all output material for the presence of asbestos. Composite samples may be for fewer than 10 days. Transmission electron microscopy (TEM) shall be used to analyze the output material for the presence of asbestos. During the initial 90-day period, all output materials must be stored on-site until analysis shows the material to be asbestos-free

or disposed of as asbestos-containing waste material according to §61.150.

(d) After the initial 90 days of operation,

(1) Continuously monitor and record the operating parameters identified during start-up performance testing and any subsequent performance testing. Any output produced during a period of deviation from the range of operating conditions established to ensure the production of nonasbestos (asbestos-free) output materials shall be:

(i) Disposed of as asbestos-containing waste material according to §61.150, or

(ii) Recycled as waste feed during process operation within the established range of operating conditions, or

(iii) Stored temporarily on-site in a leak-tight container until analyzed for asbestos content. Any product material that is not asbestos-free shall be either disposed of as asbestos-containing waste material or recycled as waste feed to the process.

(2) Collect and analyze monthly composite samples (one 200-gram (7-ounce) sample collected every 8 hours of operation) of the output material. Transmission electron microscopy shall be used to analyze the output material for the presence of asbestos.

(e) Discharge no visible emissions to the outside air from any part of the operation, or use the methods specified by §61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(f) Maintain records on-site and include the following information:

(1) Results of start-up performance testing and all subsequent performance testing, including operating parameters, feed characteristic, and analyses of output materials.

(2) Results of the composite analyses required during the initial 90 days of operation under §61.155(c).

(3) Results of the monthly composite analyses required under §61.155(d).

(4) Results of continuous monitoring and logs of process operating parameters required under §61.155 (c) and (d).

(5) The information on waste shipments received as required in §61.154(e).

(6) For output materials where no analyses were performed to determine the presence of asbestos, record the

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name and location of the purchaser or disposal site to which the output materials were sold or deposited, and the date of sale or disposal.

(7) Retain records required by paragraph (f) of this section for at least 2 years.

(g) Submit the following reports to the Administrator:

(i) A report for each analysis of product composite samples performed during the initial 90 days of operation.

(2) A quarterly report, including the following information concerning activities during each consecutive 3-month period:

(i) Results of analyses of monthly product composite samples.

(ii) A description of any deviation from the operating parameters established during performance testing, the duration of the deviation, and steps taken to correct the deviation.

(iii) Disposition of any product produced during a period of deviation, including whether it was recycled, disposed of as asbestos-containing waste material, or stored temporarily on-site until analyzed for asbestos content.

(iv) The information on waste disposal activities as required in § 61.154(f).

(h) Nonasbestos (asbestos-free) output material is not subject to any of the provisions of this subpart. Output materials in which asbestos is detected, or output materials produced when the operating parameters deviated from those established during the start-up performance testing, unless shown by TEM analysis to be asbestos-free, shall be considered to be asbestos-containing waste and shall be handled and disposed of according to §§ 61.150 and 61.154 or reprocessed while all of the established operating parameters are being met.

[55 FR 48431, Nov. 20, 1990]

§ 61.156 Cross-reference to other asbestos regulations.

In addition to this subpart, the regulations referenced in Table 1 also apply to asbestos and may be applicable to those sources specified in §§ 61.142 through 61.151, 61.154, and 61.155 of this subpart. These cross-references are presented for the reader's information and to promote compliance with the cited regulations.

TABLE 1—CROSS-REFERENCE TO OTHER ASBESTOS REGULATIONS

Agency	CFR citation	Comment
EPA	40 CFR part 763, subpart E	Requires schools to inspect for asbestos and implement response actions and submit asbestos management plans to States. Specifies use of accredited inspectors, air sampling methods, and waste disposal procedures.
	40 CFR part 427	Effluent standards for asbestos manufacturing source categories.
	40 CFR part 763, subpart G	Protects public employees performing asbestos abatement work in States not covered by OSHA asbestos standard.
OSHA	29 CFR 1910.1001	Worker protection measures—engineering controls, worker training, labeling, respiratory protection, bagging of waste, permissible exposure level.
	29 CFR 1926.1101	Worker protection measures for all construction work involving asbestos, including demolition and renovation-work practices, worker training, bagging of waste, permissible exposure level.
MSHA	30 CFR part 56, subpart D	Specifies exposure limits, engineering controls, and respiratory protection measures for workers in surface mines.
	30 CFR part 57, subpart D	Specifies exposure limits, engineering controls, and respiratory protection measures for workers in underground mines.
DOT	49 CFR parts 171 and 172	Regulates the transportation of asbestos-containing waste material. Requires waste containment and shipping papers.

[55 FR 48432, Nov. 20, 1990, as amended at 60 FR 31920, June 19, 1995; 68 FR 54793, Sept. 18, 2003; 69 FR 43324, July 20, 2004]

§ 61.157 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authorities contained in paragraph (b) of

this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities that will not be delegated to States:

- (1) Section 61.149(c)(2)
- (2) Section 61.150(a)(4)
- (3) Section 61.151(c)
- (4) Section 61.152(b)(3)
- (5) Section 61.154(d)
- (6) Section 61.155(a).

[55 FR 48433, Nov. 20, 1990]

APPENDIX A TO SUBPART M OF PART 61—INTERPRETIVE RULE GOVERNING ROOF REMOVAL OPERATIONS

1. Applicability of the Asbestos NESHAP

1.1. Asbestos-containing material (ACM) is material containing more than one percent asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy. The NESHAP classifies ACM as either "friable" or "nonfriable". Friable ACM is ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Nonfriable ACM is ACM that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

1.2. Nonfriable ACM is further classified as either Category I ACM or Category II ACM. Category I ACM and Category II ACM are distinguished from each other by their potential to release fibers when damaged. Category I ACM includes asbestos-containing gaskets, packings, resilient floor coverings, resilient floor covering mastic, and asphalt roofing products containing more than one percent asbestos. Asphalt roofing products which may contain asbestos include built-up roofing; asphalt-containing single ply membrane systems; asphalt shingles; asphalt-containing underlayment felts; asphalt-containing roof coatings and mastics; and asphalt-containing base flashings. ACM roofing products that use other bituminous or resinous binders (such as coal tars or pitches) are also considered to be Category I ACM. Category II ACM includes all other nonfriable ACM, for example, asbestos-cement (A/C) shingles, A/C tiles, and transite boards or panels containing more than one percent asbestos. Generally speaking, Category II ACM is more likely to become friable when damaged than is Category I ACM. The applicability of the NESHAP to Category I and II ACM depends on: (1) the condition of the material at the time of demolition or renovation, (2) the nature of the operation to which the material will be subjected, (3) the amount of ACM involved.

1.3. Asbestos-containing material regulated under the NESHAP is referred to as "regulated asbestos-containing material" (RACM). RACM is defined in §61.141 of the NESHAP and includes: (1) friable asbestos-containing material; (2) Category I nonfriable ACM that has become friable; (3) Category I nonfriable ACM that has been or will be sanded, ground,

cut, or abraded; or (4) Category II nonfriable ACM that has already been or is likely to become crumbled, pulverized, or reduced to powder. If the coverage threshold for RACM is met or exceeded in a renovation or demolition operation, then all friable ACM in the operation, and in certain situations, nonfriable ACM in the operation, are subject to the NESHAP.

A. Threshold Amounts of Asbestos-Containing Roofing Material

1.A.1. The NESHAP does not cover roofing projects on single family homes or on residential buildings containing four or fewer dwelling units. 40 CFR 61.141. For other roofing renovation projects, if the total asbestos-containing roof area undergoing renovation is less than 160 ft², the NESHAP does not apply, regardless of the removal method to be used, the type of material (Category I or II), or its condition (friable versus nonfriable). 40 CFR 61.145(a)(4). However, EPA would recommend the use of methods that damage asbestos-containing roofing material as little as possible. EPA has determined that where a rotating blade (RB) roof cutter or equipment that similarly damages the roofing material is used to remove Category I nonfriable asbestos-containing roofing material, the removal of 5580 ft² of that material will create 160 ft² of RACM. For the purposes of this interpretive rule, "RB roof cutter" means an engine-powered roof cutting machine with one or more rotating cutting blades the edges of which are blunt. (Equipment with blades having sharp or tapered edges, and/or which does not use a rotating blade, is used for "slicing" rather than "cutting" the roofing material; such equipment is not included in the term "RB roof cutter".) Therefore, it is EPA's interpretation that when an RB roof cutter or equipment that similarly damages the roofing material is used to remove Category I nonfriable asbestos-containing roofing material, any project that is 5580 ft² or greater is subject to the NESHAP; conversely, it is EPA's interpretation that when an RB roof cutter or equipment that similarly damages the roofing material is used to remove Category I nonfriable asbestos-containing roofing material in a roof removal project that is less than 5580 ft², the project is not subject to the NESHAP, except that notification is always required for demolitions. EPA further construes the NESHAP to mean that if slicing or other methods that do not sand, grind, cut or abrade will be used on Category I nonfriable ACM, the NESHAP does not apply, regardless of the area of roof to be removed.

1.A.2. For asbestos cement (A/C) shingles (or other Category II roofing material), if the area of the roofing material to be removed is at least 160 ft² and the removal methods will

crumble, pulverize, reduce to powder, or contaminate with RACM (from other ACM that has been crumbled, pulverized or reduced to powder) 160 ft² or more of such roofing material, the removal is subject to the NESHAP. Conversely, if the area of the A/C shingles (or other Category II roofing materials) to be removed is less than 160 ft², the removal is not subject to the NESHAP regardless of the removal method used, except that notification is always required for demolitions. 40 CFR 61.145(a). However, EPA would recommend the use of methods that damage asbestos-containing roofing material as little as possible. If A/C shingles (or other Category II roofing materials) are removed without 160 ft² or more of such roofing material being crumbled, pulverized, reduced to powder, or contaminated with RACM (from other ACM that has been crumbled, pulverized or reduced to powder), the operation is not subject to the NESHAP, even where the total area of the roofing material to be removed exceeds 160 ft²; provided, however, that if the renovation includes other operations involving RACM, the roof removal operation is covered if the total area of RACM from all renovation activities exceeds 160 ft². See the definition of regulated asbestos-containing material (RACM), 40 CFR 61.141.

1.A.3. Only roofing material that meets the definition of ACM can qualify as RACM subject to the NESHAP. Therefore, to determine if a removal operation that meets or exceeds the coverage threshold is subject to the NESHAP, any suspect roofing material (i.e., roofing material that may be ACM) should be tested for asbestos. If any such roofing material contains more than one percent asbestos and if the removal operation is covered by the NESHAP, then EPA must be notified and the work practices in §61.145(c) must be followed. In EPA's view, if a removal operation involves at least the threshold level of suspect material, a roofing contractor may choose not to test for asbestos if the contractor follows the notification and work practice requirements of the NESHAP.

B. A/C Shingle Removal (Category II ACM Removal)

1.B.1. A/C shingles, which are Category II nonfriable ACM, become regulated ACM if the material has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations. 40 CFR 61.141. However, merely breaking an A/C shingle (or any other category II ACM) that is not friable may not necessarily cause the material to become RACM. A/C shingles are typically nailed to buildings on which they are attached. EPA believes that the extent of breakage that will normally result from carefully removing A/C shingles and low-

ering the shingles to the ground will not result in crumbling, pulverizing or reducing the shingles to powder. Conversely, the extent of breakage that will normally occur if the A/C shingles are dropped from a building or scraped off of a building with heavy machinery would cause the shingles to become RACM. EPA therefore construes the NESHAP to mean that the removal of A/C shingles that are not friable, using methods that do not crumble, pulverize, or reduce the A/C shingles to powder (such as pry bars, spud bars and shovels to carefully pry the material), is not subject to the NESHAP provided that the A/C shingles are properly handled during and after removal, as discussed in this paragraph and the asbestos NESHAP. This interpretation also applies to other Category II nonfriable asbestos-containing roofing materials.

C. Cutting vs. Slicing and Manual Methods for Removal of Category I ACM

1.C.1. Because of damage to the roofing material, and the potential for fiber release, roof removal operations using rotating blade (RB) roof cutters or other equipment that sand, grind, cut or abrade the roof material are subject to the NESHAP. As EPA interprets the NESHAP, the use of certain manual methods (using equipment such as axes, hatchets, or knives, spud bars, pry bars, and shovels, but not saws) or methods that slice, shear, or punch (using equipment such as a power slicer or power plow) does not constitute "cutting, sanding, grinding or abrading." This is because these methods do not destroy the structural matrix or integrity of the material such that the material is crumbled, pulverized or reduced to powder. Hence, it is EPA's interpretation that when such methods are used, assuming the roof material is not friable, the removal operation is not subject to the regulation.

1.C.2. Power removers or power tear-off machines are typically used to pry the roofing material up from the deck after the roof membrane has been cut. It is EPA's interpretation that when these machines are used to pry roofing material up, their use is not regulated by the NESHAP.

1.C.3. As noted previously, the NESHAP only applies to the removal of asbestos-containing roofing materials. Thus, the NESHAP does not apply to the use of RB cutters to remove non-asbestos built up roofing (BUR). On roofs containing some asbestos-containing and some non-asbestos-containing materials, coverage under the NESHAP depends on the methods used to remove each type of material in addition to other coverage thresholds specified above. For example, it is not uncommon for existing roofs to be made of non-asbestos BUR and base flashings that do contain asbestos. In that situation, EPA construes the

NESHAP to be inapplicable to the removal of the non-asbestos BUR using an RB cutter so long as the RB cutter is not used to cut 5580 ft² or more of the asbestos-containing base flashing or other asbestos-containing material into sections. In addition, the use of methods that slice, shear, punch or pry could then be used to remove the asbestos flashings and not trigger coverage under the NESHAP.

II. Notification

2.1. Notification for a demolition is always required under the NESHAP. However, EPA believes that few roof removal jobs constitute "demolitions" as defined in the NESHAP (§61.141). In particular, it is EPA's view that the removal of roofing systems (i.e., the roof membrane, insulation, surfacing, coatings, flashings, mastic, shingles, and felt underlayment), when such removal is not a part of a demolition project, constitutes a "renovation" under the NESHAP. If the operation is a renovation, and Category I roofing material is being removed using either manual methods or slicing, notification is not required by the NESHAP. If Category II material is not friable and will be removed without crumbling, pulverizing, or reducing it to powder, no notification is required. Also, if the renovation involves less than the threshold area for applicability as discussed above, then no notification is required. However, if a roof removal meets the applicability and threshold requirements under the NESHAP, then EPA (or the delegated agency) must be notified in advance of the removal in accordance with the requirements of §61.145(b), as follows:

- Notification must be given in writing at least 10 working days in advance and must include the information in §61.145(b)(4), except for emergency renovations as discussed below.
- The notice must be updated as necessary, including, for example, when the amount of asbestos-containing roofing material reported changes by 20 percent or more.
- EPA must be notified if the start date of the roof removal changes. If the start date of a roof removal project is changed to an earlier date, EPA must be provided with a written notice of the new start date at least 10 working days in advance. If the start date changes to a later date, EPA must be notified by telephone as soon as possible before the original start date and a written notice must be sent as soon as possible.
- For emergency renovations (as defined in §61.141), where work must begin immediately to avoid safety or public health hazards, equipment damage, or unreasonable financial burden, the notification must be postmarked or delivered to EPA as soon as possible, but no later than the following work day.

III. Emission Control Practices

A. Requirements To Adequately Wet and Discharge No Visible Emission

3.A.1. The principal controls contained in the NESHAP for removal operations include requirements that the affected material be adequately wetted, and that asbestos waste be handled, collected, and disposed of properly. The requirements for disposal of waste materials are discussed separately in section IV below. The emission control requirements discussed in this section III apply only to roof removal operations that are covered by the NESHAP as set forth in Section I above.

3.A.2. For any operation subject to the NESHAP, the regulation (§§61.145(c)(2)(i), (3), (6)(i)) requires that RACM be adequately wet (as defined in §61.141) during the operation that damages or disturbs the asbestos material until collected for disposal.

3.A.3. When using an RB roof cutter (or any other method that sands, grinds, cuts or abrades the roofing material) to remove Category I asbestos-containing roofing material, the emission control requirements of §61.145(c) apply as discussed in Section I above. EPA will consider a roof removal project to be in compliance with the "adequately wet" and "discharge no visible emission" requirements of the NESHAP if the RB roof cutter is equipped and operated with the following: (1) a blade guard that completely encloses the blade and extends down close to the roof surface; and (2) a device for spraying a fine mist of water inside the blade guard, and which device is in operation during the cutting of the roof.

B. Exemptions From Wetting Requirements

3.B.1. The NESHAP provides that, in certain instances, wetting may not be required during the cutting of Category I asbestos roofing material with an RB roof cutter. If EPA determines in accordance with §61.145(c)(3)(i), that wetting will unavoidably damage the building, equipment inside the building, or will present a safety hazard while stripping the ACM from a facility component that remains in place, the roof removal operation will be exempted from the requirement to wet during cutting. EPA must have sufficient written information on which to base such a decision. Before proceeding with a dry removal, the contractor must have received EPA's written approval. Such exemptions will be made on a case-by-case basis.

3.B.2. It is EPA's view that, in most instances, exemptions from the wetting requirements are not necessary. Where EPA grants an exemption from wetting because of the potential for damage to the building, damage to equipment within the building or a safety hazard, the NESHAP specifies alternative control methods (§61.145(c)(3)(i)(B)).

Alternative control methods include (a) the use of local exhaust ventilation systems that capture the dust, and do not produce visible emissions, or (b) methods that are designed and operated in accordance with the requirements of §61.152, or (c) other methods that have received the written approval of EPA. EPA will consider an alternative emission control method in compliance with the NESHAP if the method has received written approval from EPA and the method is being implemented consistent with the approved procedures (§61.145(c)(3)(ii) or §61.152(b)(3)).

3.B.3. An exemption from wetting is also allowed when the air or roof surface temperature at the point of wetting is below freezing, as specified in §61.145(c)(7). If freezing temperatures are indicated as the reason for not wetting, records must be kept of the temperature at the beginning, middle and end of the day on which wetting is not performed and the records of temperature must be retained for at least 2 years. 42 CFR §61.145(c)(7)(iii). It is EPA's interpretation that in such cases, no written application to, or written approval by the Administrator is needed for using emission control methods listed in §61.145(c)(3)(i)(B), or alternative emission control methods that have been previously approved by the Administrator. However, such written application or approval is required for alternative emission control methods that have not been previously approved. Any dust and debris collected from cutting must still be kept wet and placed in containers. All of the other requirements for notification and waste disposal would continue to apply as described elsewhere in this notice and the Asbestos NESHAP.

C. Waste Collection and Handling

3.C.1. It is EPA's interpretation that waste resulting from slicing and other methods that do not cut, grind, sand or abrade Category I nonfriable asbestos-containing roofing material is not subject to the NESHAP and can be disposed of as nonasbestos waste. EPA further construes the NESHAP to provide that if Category II roofing material (such as A/C shingles) is removed and disposed of without crumbling, pulverizing, or reducing it to powder, the waste from the removal is not subject to the NESHAP waste disposal requirements. EPA also interprets the NESHAP to be inapplicable to waste resulting from roof removal operations that do not meet or exceed the coverage thresholds described in section I above. Of course, other State, local, or Federal regulations may apply.

3.C.2. It is EPA's interpretation that when an RB roof cutter, or other method that similarly damages the roofing material, is used to cut Category I asbestos containing roofing material, the damaged material from

the cut (the sawdust or debris) is considered asbestos containing waste subject to §61.150 of the NESHAP, provided the coverage thresholds discussed above in section I are met or exceeded. This sawdust or debris must be disposed of at a disposal site operated in accordance with the NESHAP. It is also EPA's interpretation of the NESHAP that if the remainder of the roof is free of the sawdust and debris generated by the cutting, or if such sawdust or debris is collected as discussed below in paragraphs 3.C.3, 3.C.4, 3.C.5 and 3.C.6, the remainder of the roof can be disposed of as nonasbestos waste because it is considered to be Category I nonfriable material (as long as the remainder of the roof is in fact nonasbestos material or if it is Category I asbestos material and the removal methods do not further sand, grind, cut or abrade the roof material). EPA further believes that if the roof is not cleaned of such sawdust or debris, i.e., it is contaminated, then it must be treated as asbestos-containing waste material and be handled in accordance with §61.150.

3.C.3. In order to be in compliance with the NESHAP while using an RB roof cutter (or device that similarly damages the roofing material) to cut Category I asbestos containing roofing material, the dust and debris resulting from the cutting of the roof should be collected as soon as possible after the cutting operation, and kept wet until collected and placed in leak-tight containers. EPA believes that where the blade guard completely encloses the blade and extends down close to the roof surface and is equipped with a device for spraying a fine mist of water inside the blade guard, and the spraying device is in operation during the cutting, most of the dust and debris from cutting will be confined along the cut. The most efficient methods to collect the dust and debris from cutting are to immediately collect or vacuum up the damaged material where it lies along the cut using a filtered vacuum cleaner or debris collector that meets the requirements of 40 CFR 61.152 to clean up as much of the debris as possible, or to gently sweep up the bulk of the debris, and then use a filtered vacuum cleaner that meets the requirements of 40 CFR 61.152 to clean up as much of the remainder of the debris as possible. On smooth surfaced roofs (nonaggregate roofs), sweeping up the debris and then wet wiping the surface may be done in place of using a filtered vacuum cleaner. It is EPA's view that if these decontamination procedures are followed, the remaining roofing material does not have to be collected and disposed of as asbestos waste. Additionally, it is EPA's view that where such decontamination procedures are followed, if the remaining portions of the roof are non-asbestos or Category I nonfriable asbestos material, and if the remaining portions are removed using removal methods that slice, shear, punch or

pry, as discussed in section 1.C above, then the remaining portions do not have to be collected and disposed of as asbestos waste and the NESHAP's no visible emissions and adequately wet requirements are not applicable to the removal of the remaining portions. In EPA's interpretation, the failure of a filtered vacuum cleaner or debris collector to collect larger chunks or pieces of damaged roofing material created by the RB roof cutter does not require the remaining roofing material to be handled and disposed of as asbestos waste, provided that such visible chunks or pieces of roofing material are collected (e.g. by gentle sweeping) and disposed of as asbestos waste. Other methods of decontamination may not be adequate, and should be approved by the local delegated agency.

3.C.4. In EPA's interpretation, if the debris from the cutting is not collected immediately, it will be necessary to lightly mist the dust or debris, until it is collected, as discussed above, and placed in containers. The dust or debris should be lightly misted frequently enough to prevent the material from drying, and to prevent airborne emissions, prior to collection as described above. It is EPA's interpretation of the NESHAP that if these procedures are followed, the remaining roofing material does not have to be collected and disposed of as asbestos waste, as long as the remaining roof material is in fact nonasbestos material or if it is Category I asbestos material and the removal methods do not further sand, grind, cut or abrade the roof material.

3.C.5. It is EPA's interpretation that, provided the roofing material is not friable prior to the cutting operation, and provided the roofing material has not been made friable by the cutting operation, the appearance of rough, jagged or damaged edges on the remaining roofing material, due to the use of an RB roof cutter, does not require that such remaining roofing material be handled and disposed of as asbestos waste. In addition, it is also EPA's interpretation that if the sawdust or debris generated by the use of an RB roof cutter has been collected as discussed in paragraphs 3.C.3, 3.C.4 and 3.C.6, the presence of dust along the edge of the remaining roof material does not render such material "friable" for purposes of this interpretive rule or the NESHAP, provided the roofing material is not friable prior to the cutting operation, and provided that the remaining roofing material near the cutline has not been made friable by the cutting operation. Where roofing material near the cutline has been made friable by the use of the RB cutter (i.e. where such remaining roofing material near the cutline can be crumbled, pulverized or reduced to powder using hand pressure), it is EPA's interpretation that the use of an encapsulant will ensure that such friable material need not be treated or disposed of as asbestos containing

waste material. The encapsulant may be applied to the friable material after the roofing material has been collected into stacks for subsequent disposal as nonasbestos waste. It is EPA's view that if the encapsulation procedure set forth in this paragraph is followed in operations where roofing material near the cutline has been rendered friable by the use of an RB roof cutter, and if the decontamination procedures set forth in paragraph 3.C.3 have been followed, the NESHAP's no visible emissions and adequately wet requirements would be met for the removal, handling and disposal of the remaining roofing material.

3.C.6. As one way to comply with the NESHAP, the dust and debris from cutting can be placed in leak-tight containers, such as plastic bags, and the containers labeled using warning labels required by OSHA (29 CFR 1926.58). In addition, the containers must have labels that identify the waste generator (such as the name of the roofing contractor, abatement contractor, and/or building owner or operator) and the location of the site at which the waste was generated.

IV. Waste Disposal

A. Disposal Requirements

4.A.1. Section 61.150(b) requires that, as soon as is practical, all collected dust and debris from cutting as well as any contaminated roofing squares, must be taken to a landfill that is operated in accordance with §61.154 or to an EPA-approved site that converts asbestos waste to nonasbestos material in accordance with §61.155. During the loading and unloading of affected waste, asbestos warning signs must be affixed to the vehicles.

B. Waste Shipment Record

4.B.1. For each load of asbestos waste that is regulated under the NESHAP, a waste shipment record (WSR) must be maintained in accordance with §61.150(d). Information that must be maintained for each waste load includes the following:

- Name, address, and telephone number of the waste generator
- Name and address of the local, State, or EPA regional office responsible for administering the asbestos NESHAP program
- Quantity of waste in cubic meters (or cubic yards)
- Name and telephone number of the disposal site operator
- Name and physical site location of the disposal site
- Date transported
- Name, address, and telephone number of the transporter(s)
- Certification that the contents meet all government regulations for transport by highways.

4.B.2. The waste generator is responsible for ensuring that a copy of the WSR is delivered to the disposal site along with the waste shipment. If a copy of the WSR signed by the disposal site operator is not returned to the waste generator within 35 days, the waste generator must contact the transporter and/or the disposal site to determine the status of the waste shipment. 40 CFR 61.150(d)(3). If the signed WSR is not received within 45 days, the waste generator must report, in writing, to the responsible NESHAP program agency and send along a copy of the WSR. 40 CFR 61.150(d)(4). Copies of WSRs, including those signed by the disposal site operator, must be retained for at least 2 years. 40 CFR 61.150(d)(5).

V. Training

5.1. For those roof removals that are subject to the NESHAP, at least one on-site supervisor trained in the provisions of the NESHAP must be present during the removal of the asbestos roofing material. 40 CFR 61.145(c)(8). In EPA's view, this person can be a job foreman, a hired consultant, or someone who can represent the building owner or contractor responsible for the removal. In addition to the initial training requirement, a refresher training course is required every 2 years. The NESHAP training requirements became effective on November 20, 1991.

5.2. Asbestos training courses developed specifically to address compliance with the NESHAP in roofing work, as well as courses developed for other purposes can satisfy this requirement of the NESHAP, as long as the course covers the areas specified in the regulation. EPA believes that Asbestos Hazard Emergency Response Act (AHERA) training courses will, for example, satisfy the NESHAP training requirements. However, nothing in this interpretive rule or in the NESHAP shall be deemed to require that roofing contractors or roofing workers performing operations covered by the NESHAP must be trained or accredited under AHERA, as amended by the Asbestos School Hazard Abatement Reauthorization Act (ASHARA). Likewise, state or local authorities may independently impose additional training, licensing, or accreditation requirements on roofing contractors performing operations covered by the NESHAP, but such additional training, licensing or accreditation is not called for by this interpretive rule or the federal NESHAP.

5.3. For removal of Category I asbestos containing roofing material where RB roof cutters or equipment that similarly damages the asbestos-containing roofing material are used, the NESHAP training requirements (§61.145(c)(8)) apply as discussed in Section I above. It is EPA's intention that removal of Category I asbestos-containing roofing mate-

rial using hatchets, axes, knives, and/or the use of spud bars, pry bars and shovels to lift the roofing material, or similar removal methods that slice, punch, or shear the roof membrane are not subject to the training requirements, since these methods do not cause the roof removal to be subject to the NESHAP. Likewise, it is EPA's intention that roof removal operations involving Category II nonfriable ACM are not subject to the training requirements where such operations are not subject to the NESHAP as discussed in section I above.

[59 FR 31158, June 17, 1994, as amended at 60 FR 31920, June 19, 1995]

Subpart N—National Emission Standard for Inorganic Arsenic Emissions From Glass Manufacturing Plants

SOURCE: 51 FR 28025, Aug. 4, 1986, unless otherwise noted.

§61.160 Applicability and designation of source.

(a) The source to which this subpart applies is each glass melting furnace that uses commercial arsenic as a raw material. This subpart does not apply to pot furnaces.

(b) Rebrickng is not considered construction or modification for the purposes of §61.05(a).

§61.161 Definitions.

The terms used in this subpart are defined in the Clean Air Act, in §61.02, or in this section as follows:

Arsenic-containing glass type means any glass that is distinguished from other glass solely by the weight percent of arsenic added as a raw material and by the weight percent of arsenic in the glass produced. Any two or more glasses that have the same weight percent of arsenic in the raw materials as well as in the glass produced shall be considered to belong to one arsenic-containing glass type, without regard to the recipe used or any other characteristics of the glass or the method of production.

By-pass the control device means to operate the glass melting furnace without operating the control device to which that furnace's emissions are directed routinely.

Commercial arsenic means any form of arsenic that is produced by extraction